

STRATEGY

BEI Technologies Creates Systron Donner Operations

BEI Technologies' Systron Donner division has been split into two operation in order to focus better on the market opportunities for the company's proprietary quartz MEMS GyroChip.

The Systron Donner Inertial division has produced its 5mth GyroChip automotive yaw rate sensor. It will focus on the aerospace, defence and commercial aviation sectors. The Systron Donner Automotive division will continue to provide products and technology for the rapidly growing automotive stability control, roll-over and emerging system markets using the highly accurate two-degrees-per-second GyroChip. The aim is to use BEI's technical aerospace and defence expertise to provide a six-degrees-of-freedom Inertial measurement Unit (IMU) for the automotive market, and to use its high-volume/low cost automotive expertise in the aerospace, defence and aviations operations.

BEI Technologies News 15.10.02

Bosch Sees Growth in Diesel Car Sales in UK

Bosch expects the diesel share of car sales in the UK to reach 30-35% by 2005 and 50% by 2008.

Demand is being driven by the requirement for fuel economy, tax benefits and growing appreciation of the high torque driving characteristics of the modern direct-injection diesel engines which Bosch has helped create. The underlying reasons for growth in Europe include the commitment of all European producers to reducing fleet average CO2 emissions to 140g/km by 2008, which can only be achieved by a higher proportion of diesel versions in model ranges. Bosch developments in diesel systems include higher injection pressures, dual pre- and post-injections and an electronic metering system designed to make de-NOx catalyst exhaust systems more effective. Bosch is starting series production of the diesel lambda sensor, which will make its debut on the VW Touareg.

Bosch News Release 17.10.02 ENVIRONMENT

November 2002

Dana Sells Non-Core Businesses

Dana has signed agreements with The Riverside Company, a leveraged buy-out firm, to sell its Tekonsha Engineering, Theodore Bargman and American Electronic Components.

Dana News 29.10.02

Delphi Connection Systems Expects Continued Growth

Delphi Connection Systems was the only major connector company to see positive growth in 2001 and it sees the trend continuing in 2002.

Sales in the global connector industry fell by 19% in 2001, but Delphi saw revenue growth of 5%. Delphi Connector Systems is the fourth largest connector company in the world, with sales of around £1.1bn. So far in 2002, it has continued to widen its customer base, recording new over \$103.7m worth of new business. The product line continues to be refined, most recently with the enhancement of the GT Lever Lock connection family. The Gold Dot technology, used as a board-to-board connection system, was recently introduced for harsh environment applications such as in powertrain and transmission control units. Delphi Connection Systems also has a strong presence in the CV market, where it recently launched the Power Pack connection system series that addresses the need for a high power/high current application.

Delphi News 8.10.02

Denso Increases Deliveries to Big 3

The Big 3 are accounting for an increasingly large part of Denso's turnover.

In the 2002/03 fiscal year (which ends in March 2003), DaimlerChrysler, Ford and GM will account for almost 11% of Denso's revenues, exceeding the previous record of 10.7% in 1998. DaimlerChrysler is expected to account for over 5% of turnover and Ford for over 2%. GM should account for 2.5%, compared with 2.3% in 2001.

Nikkei Business Daily 4.10.02

Jobs Go at Dumoutier

Dumoutier is shedding 45 jobs at its Le Mans, France, site, cutting the workforce to around 100.

Dumoutier, a family firm, is facing major cash problems and was placed in administration in July 2002. Dumoutier

produces interior trim products such as door panels, parcel shelves and dashboards. It has suffered from the slowdown in operations of its main customers, Matra, Renault and Renault Trucks. The poor sales of Renault's premium models in particular and the lack of signs of recovery on this market, have made the job cuts 'inevitable'. Where Dumoutier had reckoned with 250 units a day of the Vel Satis, none has been produced since June 2002. Output of the Avantime is around 30 units a day, compared with the 70-100 originally forecast. There have also been postponements of orders from other customers, such as Peugeot. In 2001, Dumoutier made a small profit on turnover of Euro 18.2m.

L'Usine Nouvelle 3.10.02 PRODUCTION

eNGENUITY and Pi Technology Cooperate

eNGENUITY Technologies, a provider of software tools and components for the development of advanced visual applications, and Pi Technology, a developer of electronic systems of the automotive sector, are to cooperate to bring to market new products and services for the development of dashboard displays.

Pi Technology will integrate eNGENUITY's SPeD product and Mathworks' Simulink product to give a solution which will allow a rich Human-Machine-Interface (HMI) to be overlaid on a complex behavioural system model and which will be used either to perform high-fidelity simulations in the early stage of a project or to create standalone deployable executables. Applications include the creation of integrated in-vehicle instruments such as instrument clusters, dashboards, telematics and infotainment systems.

eNGENUITY/Pi News 22.10.02

Office in Japan for Federal-Mogul

Federal-Mogul has set up an Asian regional office in Yokohama, Japan, where it will also site a new technical centre.

The technical centre will open early in 2004 and will provide application engineering and sales support to OEMs in Japan. Federal-Mogul is expanding its presence in Japan to serve customers in a range of emerging technologies, including those related to diesel engine performance, power cylinder systems, improving fuel economy and emissions, and advanced brake friction materials.

Federal-Mogul News 10.10.02

Gentex Share Repurchase Plan Authorised

The executive committee of the board of directors of Gentex has authorised a share repurchase plan. Gentex is authorised, from time to time, to purchase up to 4m shares of its common stock.

Gentex News 8.10.02

Guilford Mills Emerges from Bankruptcy

Guilford Mills has emerged from bankruptcy. Guilford filed for Chapter 11 protection in March 2002.

The company now has senior debt of around \$145m, compared with \$270m when it declared bankruptcy. All existing common stock will be cancelled and new stock issued. Senior lenders will receive 90% of the new stock, while existing shareholders will receive the rest at a ratio of one new stock for every 34.8 shares of old common stock.

Guilford Mills News 4.10.02

Hella Sees Return to Profitability for Lighting Operations

Hella Hueck expects its lighting division to return to profitability by the end of the current year. The company has suffered from increasing competition and pricing pressures in its core lighting business.

The trend towards clear lenses has meant that more lighting components are on display in headlamps and that has forced producers to invest in raising cosmetic quality standards. In the last financial year, which ended on 31 May 2002, the lighting division increased revenue by 2% to \$1.68bn, despite a 6% fall in sales in the US. Hella has transferred some of its production to lower-cost locations and is currently investing Euro 30m in two new lighting plants at Nove Mesto and Banovce in Slovakia. The Banovce plant will produce signal lighting and will have an annual capacity of 1.5m multi-function lamp and around 10m single-function lamps. Hella recently started producing headlamps and signal lamps at a plant in Beijing, initially for CVs. It has also set up a subsidiary in Changchun to produce plastic injection moulding tooling. Hella is growing through alliances with medium-sized suppliers, including Behr, Stanley Electric and Leoni. With Leoni, Hella is developing an intelligent wiring system for the next-generation Opel Astra.

Automotive News Europe p18 7.10.02 CAPACITY

Huntsman Completes Financial Restructuring

Huntsman has completed its financial restructuring, which reduces debt by approximately \$775m.

The Huntsman family retains operational and board control. Huntsman intends to complete the acquisition of ICI's debt and equity interest in Huntsman by the second quarter of 2003. The transaction will result in further debt reduction to the combined Huntsman companies.

Huntsman News 30.9.02

Infineon to Cut New Plant Investment

Infineon is to cut investment in new factories in the light of the worst downturn in the history of the semiconductor market.

Infineon will no longer invest in plants that produce non-memory products, which generate most of its sales. If demand for logic products becomes greater than current capacity, Infineon will turn to foundries for contract chip production. Logic chips are used in car entertainment systems and mobile phones. Infineon has older memory chip production capability that it can shift to non-memory, but the reverse is not possible. The company currently outsources 10-15% of all its output.

Infineon News 8.10.02 CAPACITY

Restructuring at Matsushita

As part of group restructuring, Matsushita Electrical Industrial is to set up a new internal divisional company, Panasonic Automotive Systems Company, which will be responsible for the entire Matsushita group's car electronics business.

Matsushita News 30.10.02

Nexiq Files for Chapter 11

Nexiq Technologies and some of its subsidiaries have filed voluntary Chapter 11 bankruptcy petitions with the US Bankruptcy Court for the Eastern District of Michigan.

The aim is to conduct and consummate the sale of significantly all of the company's operations as quickly as possible. Filings have been made for Nexiq Technologies, WPI Micro Processor Systems and Diversified Software Industries. To conserve capital, Nexiq will implement a comprehensive cost-cutting programme that will involve further job cuts.

Nexiq News 14.10.02

Jobs to Go at Nexiq

Nexiq Technologies is reducing its workforce in order to cut costs and improve efficiency. 46 jobs have been shed, around 35% of the total workforce.

Nexiq News 8.10.02

Pechiney Confirms Growth Forecasts

The Pechiney group has confirmed its forecast of turnover on automotive operations of Euro 700m in 2005, compared with Euro 500m in 2001.

The company will benefit from the growing trend for vehicle producers to use aluminium. The aluminium content of European vehicles has risen to 100kg (out of an average weight of around 1,100kg) in 2002 from 55kg in 1990. Three quarters of growth comes from applications such as bonnets and shock absorbers. New products developed by Pechiney account for 20% of Pechiney Automotive's sales, but will rise to over 50% within five years. Pechiney's aluminium sheet is used for the bonnet

of the Peugeot 607, Renault Vel Satis and Mercedes-Benz E-Class, while its profiles are used on the door frames of the Smart, the Audi A8 structure and the platform components of the Citroen C5.

Autoactu 30.9.02

Peguform Dispute with US Parent

Peguform has been in dispute with its US Parent, Venture Industries, for several months, over its insolvency process.

At the end of May 2002, the management of Peguform in Boetzingen, Germany, filed for temporary insolvency, against the wishes of Venture. It has now succeeded in freeing itself from Venture. According to Robert Orzschig of the IG BCE union, Venture was systematically bleeding Peguform dry and had been totally living off Peguform since spring 2002. The task now is to get Peguform back on its feet. Help has already been offered by customers. In order to ensure that production continued, leading German vehicle producers have helped out financially. Peguform has seven plants in Germany, employing a workforce of 5,500. Worldwide it employs 12,000 workers.

Handelsblatt 1.10.02

Philips to Sell Voice Control and Telephony Operations

Philips is to sell the voice control and telephony operations of Philips Speech Processing to ScanSoft.

The combines offering of ScanSoft and Philips Speech Processing includes the industry's most complete portfolio of speech technologies from a single source. Products range from world-leading speech recognition technology for embedded and server-based environments to state-of-the-art text-to-speech technology. The deal is expected to close in the first quarter of 2003.

Philips New Release 8.10.02 M&A

Administration for Saliens Industrie

Saliens Industrie of France has gone into administration.

A third of the 120 workers at the Reynies (Tarn-et-Garonne) site will be subject to a social plan

Other group companies are not affected. The Saliens group produces technical plastic and rubber parts, generating turnover of Euro 33m in 2001. 80% of turnover is with the automotive sector. The company has been faced with declines in orders from its largest customers.

Autoactu 11.10.02

ThyssenKrupp Plans for Business with US Producers

Ulrich Middelmann, chief executive of the steel division of ThyssenKrupp and group vice-chairman, wants the company to be involved in the restructuring of the US steel industry and to do business with major US vehicle producers.

The car industry currently accounts for around 30% of ThyssenKrupp's Euro 12bn annual steel sales, but only around a sixth of its output is sold outside Europe. Mr Middelmann wants ThyssenKrupp to set up a joint venture in the US with whichever steel firm emerges as the strongest from the round of merger talks in the US steel industry. This would give it access to car producers such as DaimlerChrysler and GM, which are major customers in Europe. One option is a link with a successor company to Bethlehem Steel, which is keen to consider merger possibilities after securing a financial deal to help rescue it from bankruptcy. Ideas similar to those of Corus and its plans to merge with CSN of Brazil, have been studied, but such an alliance is seen as strategically less attractive than the type of joint venture ThyssenKrupp has with CSN.

Financial Times p29 29.10.02

Valeo Expects North American Sales to Nearly Double

Valeo expects its sales in North America to rise to \$4bn in five years from \$2.2bn in 2001, mostly as a result of partnerships and the company's existing technologies, rather than acquisitions.

Valeo already has annual sales of over \$1bn with GM and Daimler Chrysler. According to Thierry Morin, chairman, vehicles sold in Europe often have more equipment than similar vehicles sold in the US. For example, rain-sensing windscreen wipers and high-intensity headlamps are mainstream in Europe, but not common in North America. In addition, today's small cars have many of the same options as luxury models, forcing producers to search for new technology to distinguish high-end vehicles. A new application that could drive future sales from North America is a radar-based warning system that alerts drivers if another vehicle is in their blind spot. One US and one European producer are considering using the technology, which is being developed in a joint venture with Raytheon, and which is expected to be on the market in 2005 or 2006.

Valeo News 24.10.02

Valeo Launches 'Valeo Added' Campaign

Valeo has launched its 'Valeo Added' campaign at the Paris Motor Show. The campaign emphasises Valeo's technology partnerships with customers and the added value brought to customers and consumers.

According to Thierry Morin, chairman, the campaign expresses the company's strategic objective of achieving technology leadership by the design and manufacture of innovative systems in a total quality environment. Valeo's focus on R&D reflects current trends in the industry, where producers expect suppliers to take on more and more responsibility for 'system level' design and to assume design authority for the integration of new functions into increasingly complex systems. Valeo Added innovations include: the parking slot measurement system; the battery management and disconnect unit; power line

communications; clutch-by-wire; flexible flywheel; Opti-Wash; reversing front wiper motor; the ERST programmable, near silent, rear wiper motor; active infra-red night vision; electrical steering column lock; top column lock; belt-driven starter-alternator; integrated starter-alternator, photocatalysis; and soft air diffusion system.

Valeo Press Release 3.10.02

ZF Seeks More Luxury Car Business

ZF is seeking to increase its systems business on vehicles with volumes of between 100,000 and 200,000 units a year.

ZF already supplies complete axles for vehicles such as the Mercedes-Benz M-Class and BMW X5 in North America, where its chassis systems volume rose by 14% in 2001. ZF is also to supply axle modules for the future BMW X3. ZF is seeking systems business in axle of driveline areas that already have a high ZF content.

Overall, revenue is expected to rise by 3% in 2002, excluding ZF Sachs, whose sales are expected to rise by 7%. The car chassis business is driving growth, with a rise of 12% in sales in 2001. The driveline business is expected to be flat in the current year, with the second half showing an improvement on the first half as several new cars are equipped with the new 6-speed automatic transmission, which was launched in the BMW 7-Series in 2001.

Automotive News Europe p24 7.10.02

NEW PRODUCTS AND TECHNOLOGY

New Weatherstrip Tape from 3M

3M Automotive has developed the 3M Acrylic Plus Sealing Tape ST 1200 in response to customer requests for a more robust product.

ST1200 is designed to achieve a higher level of performance for attaching primary and secondary weatherstrip seals than its predecessor. It provides: improved wet out; better initial and long-term adhesion to a wider variety of paint systems; better seal conformability over hem flanges and uneven sheet melt; improved seal-attachment aesthetics because of its black colour and low elongation; robust performance when exposed to adverse environmental conditions; and reduced launch, rework and warranty issues. The tape uses a more aggressive adhesive with higher initial tack and quicker adhesion build than the original 3M Acrylic Foam Tapes.

3M News 2.10.02

Acunia Adds Window CE.net to Xingu Platform

Acunia's Embedded Solutions business unit is porting the Windows CE.net operating system on its Xingu embedded processing platform.

Xingu is designed to be operating system agnostic and Acunia has already ported the Linux OS on its processing platform. Acunia is also investigating other operating system. In the automotive sector, QNX, VxWorks are seriously being considered as well as Windows CE.net and Linux.

Acunia News 8.10.02

New Alchemy Solutions Design Kit from AMD

AMD has introduced the AMD Alchemy Solutions Driver Information Reference Design Kit. Based on the AMD Alchemy Solutions Au1500 processor and AMD's Flash memory technology.

The kit is a tool to aid the development of software and hardware applications for automotive navigation/entertainment devices. The kit is a platform that helps enable customers to develop turn-by-turn navigation with voice input and voice command through a GPS module, future Wireless Wide Area Network connections and future audio sound systems. It helps enable software applications development for streaming media, including MPEG1, MPEG2, MPEG4 and DVD playback. It supports QNX Neutrino RTOS.

AMD News 22.10.02

New Flash Memory Device from AMD

AMD has announced the availability of samples of the industry's fastest Flash memory device designed to operate in demanding, high-temperature automotive environments.

The Am29BDD160 is a 16 Megabit device designed to meet demands for performance and reliability. Applications include powertrain management, high-end engine control modules and ABS. Access is up to 33% faster and data throughput up to 65% greater than with competing devices. It can operate over a temperature range of -40degC to +145deg C. It also features AMD's Simultaneous read/write architecture to further enhance performance and enable automotive black box data recovery functionality. Volume production is expected to start at the end of 2002.

AMD News 22.10.02

New Modules and Systems from ArvinMeritor

ArviMeritor has introduced new modules and systems to address critical safety and environmental demands. Acceptance of the new technology by OE and aftermarket customers will grow company sales over the next few years.

The new products are: heavy-duty suspension systems, which offer improved ride and handling for truck and trailer; electronic stability control and braking systems for CVs which shorten response time and improve stopping distances; emissions technologies to meet future regulations on reduced diesel particulate and NOx emissions from heavy-duty vehicles; modular suspension systems, which offer enhanced vehicle stability and improve ride and comfort for light vehicles; advanced door concepts, which feature enhanced safety-latching and signature-sound locking; and an on-board fuel-reforming device which converts hydrocarbon fuel into hydrogen-rich gas for improved fuel economy and reduced emissions.

New Contracts include: rear drive axles for Volvo Powertrain and Mack Trucks; FreedomLine transmission for five truck OEMs; advanced front and rear suspension modules for Blue Bird Coach; roof module for Smart and another global OEM; and Air2Air complete air and emissions management system for the 2003 Chevrolet SSR.

ArvinMeritor News 1.10.02

New ASIC product from AMI Semiconductor

AMI Semiconductor has introduced the ASTRX2 to its range of single-chip transceiver products suited to wireless automotive applications such as remote keyless entry, tyre pressure control and adaptive radio control.

AMI Semiconductor's ASIC plant at Oudenaarde in Belgium is among the industry's first to gain ISO/TS 16949 certification.

AMI Semiconductor News 21.10.02

BASF Plastics Create New Design Opportunities

The increasing use of plastics in automotive applications will allow manufacturers more freedom in the design of new cars in coming years.

According to Susanne Mueller of BASF's Performance Polymers operations in North America, the key trend in the uses of plastics in the automotive sector in the next few years will be the replacement of the metal structure in the front end of new vehicles with a hybrid of engineering plastics and metal. Replacing the metal structure behind the grille with a hybrid of metal and plastic will help enhance manufacturing efficiency because of the increasing trend towards modular assembly and will enhance environmental performance via fuel efficiency because of weight reduction. There should be more creative front end designs over the next few years as designers test the limits.

BASF News 16.10.02

Eco-Friendly Air Conditioning from Behr

Behr is developing a more ecologically friendly air conditioning system at its Rouffach plant in France.

Behr is using CO₂ as a substitute for the freon-based refrigerant currently in use in the automotive industry. The company says that CO₂ will contribute less to the greenhouse effect and will cut petrol consumption by 20%. The system also halves the time for the interior temperature to fall from 70deg C to 25deg C to a quarter of an hour. Series production of the new system is due to start in 2005. Behr Rouffach is also working on a 'four zone' system which will enable each passenger to regulate temperature from a single climate control group. In 2001, Behr France had turnover of Euro 552m.

Autoactu 8.10.02 ENVIRONMENT

TwinCeiver Tuner from Blaupunkt

Blaupunkt's third-generation Skyline car stereo series features the new TwinCeiver, the world's smallest dual tuner. The top-of-the range models are the San Francisco CD72 and the Bremen CD72.

Two digital reception paths and two intermediate frequency converters are located on a single silicon chip. The chip also includes DDA (Digital Directional Antenna). Access to two antennas is the key to heightened performance in the new receivers. The DDA technology is similar to that used by an extremely fast, automatically tracked antenna. The TwinCeiver constantly evaluates the digitised signals sent from the two antennas and combines them to form a strong interference-free signal. As a result, the car stereos are able to virtually eliminate multi-path interference and receive stations that were considered out of reception range. The stereos also have a Traffic Message Channel, self-adjusting Digital Sound Adjustment + equaliser. The Bremen is equipped with the TIM Traffic Memo, while the San Francisco has a very powerful output stage with a switch-mode power supply and 4 x 65 watts of maximum power.

Blaupunkt News Release October 2002

New Havoline Motor Oil from ChevronTexaco

ChevronTexaco Global Lubricants has launched an enhanced version of its Havoline car motor oil.

The new oil demonstrated almost 40% less wear than the previous version in an industry-standard test that measures the wear protection of motor oils on valve trains. The oil will be available in SAE 5W-30, 10W-30, 10W-40, 20W-50, 30 and 40 grades and all meet API SL requirements.

ChevronTexaco News 29.10.02

Continental Teves Technology on Show at Convergence 2002

Continental Teves is to demonstrate its electronics technology at Convergence 2002.

Products on show include: Gateway, a stand-alone unit, which can be mounted virtually anywhere within the vehicle and which connects the different buses, translating protocols and command up and down the vehicle information chain; distance control technologies, including camera-based lanekeepign systems, radar-based parking assistance with braking intervention, and stop-and-go systems that work in conjunction with Intelligent Cruise Control to provide driver support in slow-moving traffic; and occupant safety technologies - sensors that improve occupant safety by providing early detection of possible impact.

Continental Teves News 16.10.02

Anti-Rollover Protection from Continental Teves

Continental Teves has presented its new anti-rollover protection (ARP) system, which anticipates vehicle rollover and then applies individual brakes automatically, depending on which way the car is veering, to quickly straighten and upright the vehicle before it turns and flips over.

ARP, which is currently under development, is built on Continental's ESP system that, in turn, is based on ABS and TCS. ARP monitors the vehicle up to 150 times a second. Continental has also presented its ESP II system, which adds electric steering to give an added measure of control and safety. In addition to using the brakes to correct oversteer and understeer, ESP II can turn the front wheels to correct driver steering errors. Stopping distances are reduced when the right and left sides of the vehicle are on different surfaces and vehicle responsiveness is improved. ESP II continuously compares the actual driving condition conveyed by the sensor with the driver's intention. The software recognises where the driver wants to steer via the ABS speed sensors and by the steering movement. The actual path of the car is calculated using vehicle speed, rotation and acceleration measured by other sensors.

Continental Teves has also demonstrated the 30-metre car, a specially prepared VW Golf, modified to use electro-hydraulic braking, air springs and adjustable shock absorbers and specially designed tyres to reduce stopping distances from 62mph to 98.2ft., compared with 140ft for an average passenger vehicle.

Continental Teves News 15.10.02

Dupla Steel from Corus for Fasteners

Corus has developed Dupla, which has an enhanced chemical composition and improved process controls, that enable it to be formed into high-strength bolts and rivets without the need for quenching and tempering.

Quenching and tempering were needed with previous grades of steel in order to give the required strength properties once it had been formed into a bolt. The new product means the supply chain can be much more

efficient, vital in industries where cold-headed fasteners are used,

Corus Press Release 11.10.02

EPA Certification for Third Cummins Engine

Cummins has received unconditional certification for its heavy-duty ISM engine from the US Environmental Protection Agency.

The certification enables Cummins to offer a complete range of certified and compliant heavy-duty engines. The 11L ISM engine, with output ranging from 280hp to 385hp, complements the Cummins ISX product in meeting the needs of short-haul trucking, vocational and bus customers. Cummins will also offer the ISM in a restricted 400hp and 450hp for coach, recreational vehicle and fire truck applications. The ISM uses the same cooled exhaust gas recirculation sub-system as the ISX and ISB.

Cummins News 30.9.02 ENVIRONMENT

US DOE Funding for Cummins Westport Fuel System Development

Cummins Westport has won \$760,000 in US Department of Energy funding to improve its heavy-duty vehicle LNG fuel pump and storage technology.

The funding is aimed at supporting the expanded use of LNG for heavy-duty trucks and buses and lessen US dependency on imported oil. The goal of the one-year programme is to develop and demonstrate an advanced-design integrated fuel tank and pump system. Cummins Westport will develop technology to enable refuelling with LNG at its maximum-density state, to provide the longest possible vehicle range and hold time for a given fuel tank size. In addition, the storage technology will eliminate the need for pressure-increasing equipment at LNG refuelling stations. The advances will enhance the attractiveness of vehicles incorporating the ISXG and ISMG engines.

Cummins Westport News 21.10.02 ENVIRONMENT

12-Volt Stop-Start Technology from Dana

Dana has developed a new starter/alternator, which enables stop-start technology with traditional 12-volt electrical systems, resulting in improved fuel economy and reduced emissions.

The technology saves fuel by shutting off the engine when the vehicle comes to a stop and restarts it instantly when the driver's foot is removed from the brake pedal. Restart occurs in less than 300 milliseconds. The design uses switched reluctance technology and combines a motor and a generator in one unit. Compared with equivalent AC induction and DC magnet systems, the rotor is less complex. No internal heat is generated and the system is more efficient than existing ones in low-speed generation. The starter/alternator can be programmed in a variety of

ways, such as increased time intervals before the engine stops in the event of frequent stops and starts in a traffic jam. The technology may also provide a boost in bringing electric power steering to market faster as it is able to power advanced electrical systems.

Dana News 21.10.02

Dana Thermal Management Technology to Protect Underbonnet Electronics

Dana's Engine and Fluid Management Group is using its thermal management expertise to develop new solutions to protect electronics in harsh underbonnet environments.

Dana is developing a number of cooling pump and heat exchanger solutions to manage heat effectively. Where a cooling medium is readily available, the fuel supply can be routed through the ECU and a heat exchanger created from the aluminium casing, as developed for a truck producer. Where a cooling medium is not available, or the problem comes from heat soak after the engine is shut down, a range of electric pumps has been developed using both microprocessor-controlled brushless DC motors and simple on/off brushed motor devices. Heat exchangers have been developed for the independent cooling of ECU batteries, starter/alternator devices and electric motors.

Dana News 21.10.02

Intelligent Cooling System from Dana

At Convergence 2002, Dana is showing its new Intelligent Cooling system, that improves engine performance and fuel economy by regulating coolant flow based on real-time engine temperature rather than engine speed.

The new system allows the engine to operate at higher temperatures, with more uniformity and significantly greater control. It combines a high-performance electric water pump, a multi-port, proportional flow control valve to replace the thermostat, a speed-controllable cooling fan, a smart cylinder head gasket with embedded temperature sensors, and system control capability. Real-time thermal data comes from a smart cylinder head gasket developed by Dana. The gasket features embedded sensors, making it possible for microprocessors to monitor the environment inside the heart of the engine and make necessary adjustments. A high-performance electric water pump varies coolant flow rate independent of engine speed, reducing engine parasitic loss and enhancing performance in low-speed, high-load operating conditions. It also provides heat soak protection after key-off. A multiport proportional flow control valve controls coolant flow the heater core or the secondary cooling circuits.

Dana News 21.10.02 ENVIRONMENT

Intelligent Lubrication System from Dana

Dana's Intelligent Lubrication system matches real-time engine and transmission oil demands with a controlled,

consistent oil supply, thus enhancing durability, reducing cold start emissions, saving fuel and extending oil change intervals.

The system features a secondary electric oil-boost pump, which meets peak oil demands at low engine speeds and supplements a downsized, conventional engine-driven oil pump. The system can pre-prime the engine prior to start-up, eliminating dry running and reducing starting torque during cranking. It can also be used to initialise variable valve timing in order to reduce cold start emissions. The arrangement can be standardised across entire engine or transmission families, helping offset the cost of the secondary pump. The electric pump can be remotely mounted for maximum packaging flexibility.

Dana News 21.10.02

New E-Steering Technology from Dana

At Convergence 2002, Dana is presenting its Electric-Hydrostatic Steering Assist Module (EHSAM), which offers significant fuel savings and adaptability to existing vehicle design.

EHSAM combines on-demand electrically powered steering with hydraulic steering gears. The fuel savings come from the elimination of the hydraulic steering pump and its associated parasitic losses. EHSAM can be fitted to existing vehicle platforms as it can be remotely mounted using the existing rack, steering and suspension geometry. It includes a steering column torque sensor, which measures the amount of force applied to the steering wheel. That information is combined with vehicle speed data to calculate the pressure needed to assist the driver in turning. Information is also shared with other systems, such as those that control suspensions, stability, traction, braking, engine controls and adaptive cruise control. EHSAM can operate with both 12-volt and 42-volt applications and is steer-by-wire capable.

Dana News 21.10.02

Delphi to Lead Driver Distraction Research

Delphi has been selected by the US NHTSA's SAVE-IT (SAfety VEhicles using adaptive Interface Technologies) research programme.

The key objective of the programme is to demonstrate a viable proof of concept that is capable of reducing distraction-related crashes and enhancing the effectiveness of collision warning systems. The programme will be administered by the US Department of Transportation's Volpe National Transportations Systems Center. GM and Ford are also members of the programme team. Seeing Machines will also participate with the development of a non-invasive eye-tracking system that will support human factors research and system development. The programme will research and develop a closed-loop vehicle environment that not only includes sophisticated telematics, mobile office, entertainment and collision

warnings systems, but also incorporates the state of the driver.

Delphi News 30.10.02

Delphi Offers Sirius Receivers for CVs

Delphi is offering receivers for Sirius Satellite Radio service, validated specifically for heavy-duty trucks.

In addition to offering coast-to-coast coverage, digital-quality sound and a wide variety of programming options from Sirius' 100 channels, the user interface is simple and easy to use. The alphanumeric LCD provides information including the channel, type of music and song and artist name.

Delphi/Sirius News 28.10.02

42V Belt Alternator Starter System from Delphi

Delphi presented its Energen 42V Belt Alternator Starter System at Convergence 2002. The system replaces a conventional vehicle's existing starter and generator with a single high-power belt-driven motor/generator, providing an 8-10% fuel economy improvement in city traffic.

The system provides dual-voltage 42V/14V architecture. In generating mode, the belt-driven electric machine, along with the electronics box, which contains a power inverter and machine controller, produces electrical power at a nominal voltage of 42 volts and charges a 36-volt battery. A DC-DC converter is used to obtain 14 volts from 42 volts to charge the 12-volt battery and power the vehicle's conventional electrical accessories. In motoring mode, the inverter takes 42 volts DC input and produces AC power for the electric machine to start the internal combustion engine. Other functions include: regenerative braking, torque smoothing and power boost.

Delphi News 23.10.02

Delphi Transmission Interface Technologies for CVs

Delphi is developing transmission interface technologies, for heavy-duty and commercial vehicles, designed specifically for high reliability and long life.

The electronic pushbutton interface and lever interface can be customised to meet manufacturers' requirements. The designs profile crisp, consistent actuation and the units are fully sealed to protect them from severe operating environments. They are of a durable lightweight construction and the package size, mounting, graphics, display and lighting can be adapted to customer specifications. Both units use a vacuum fluorescent display, which functions better than LCD in extreme temperature and lighting environments. The pushbutton and lever transmission interface designs are expected to be available for commercial vehicle applications as early as 2004.

Delphi News 23.10.02

Column Integrated Module from Delphi

Delphi is showing its Column Integrated Module (CIM) at Convergence 2002. The CIM integrates all of the 'top-of-column' electro-mechanical and electronic features into one functional module.

The CIM provides an interface between the steering column and steering wheel switches. It uses a snap-fit design, which enables switch controls to plug into the same base unit of the steering column system. The design simplifies vehicle assembly and improves product reliability through reduced wiring complexity in the steering column. Market acceptance of the CIM is strong as the module can be customised to fit the styling needs and functionality of the vehicle and is easily upgraded for future content changes. In 2002, Delphi has received orders worth over \$70m for the CIM.

Delphi News 22.10.02

Delphi Enhances Forewarn System

Delphi has enhanced its Forewarn Back-Up Aid (BUA) to give the system more design flexibility and a more compact and inconspicuous package.

The all-radar reversing aid system will be available for 2005 model year vehicles. It can be completely hidden in the bumper and will integrate a dual-beam radar sensor and controller, resulting in a compact package that requires fewer connections. Forewarn BUA helps improve the driver's ability to avoid accidents while reversing. The rear detection is three times deeper than ultrasonic-only parking assist systems. A recent report found that reversing accidents resulted in over 2,700 hospital emergency treatments in the US between July 2000 and June 2001.

Delphi News 22.10.02

Digital Mobile Broadcasting from Delphi

Delphi's DVB-T brings distortion-free mobile reception technology to the vehicle, offering multi-programme TV, which includes stereo and surround sound, and audio and data services within one physical transmission channel.

DVB-T allows passengers to view programmes with exceptional quality beyond the traditional use of analogue television. The technology allows Delphi to make the transition for the viewer from home to vehicle without loss of video or sound quality. The initial key market regions include Europe, Japan and Brazil.

Delphi News 21.10.02

New Safety and Comfort Technologies from Delphi

Delphi is to showcase its new safety and comfort and convenience technologies at Convergence 2002.

The technologies include: the SmartWindow non-contact window management system, which uses optical technology for 'express-up' power window obstacle detection; Dual Beam Back-Up Aid, an all-radar system which allows for a more compact package that is easy to conceal in the rear bumper and which eliminates the ultrasonic sensors used in the previous generation and therefore requires fewer connections; the Battery Disconnect and Sensing Device, which provides post-crash battery circuit protection as well as disconnecting during low battery conditions; SKYFi, a next-generation plug and play satellite radio that plays in the car, home, office or almost anywhere; and DVB-T, a TV receiver system, which enables passengers to enjoy distortion-free mobile television in the vehicle.

Delphi News 17.10.02

EPA Certification for Detroit Diesel Series 60 Engine

Detroit Diesel has received EPA certification of its 12.7L and 14L Series 60 on-highway engines.

The Series 60 engine is fully certified to the new 2.5g/hp-hr NOx + NMHC standard and does not require an aftertreatment device of any kind. The Series 60 will be equipped with EGR. In addition, two different families of the Series 50 urban bus engines have received emissions certification. Detroit Diesel has also submitted a certification application for a Series 50 urban bus engine equipped with a particulate filter. Once certified, it will be the only heavy duty diesel engine certified to the most stringent California particulate standard of 0.01g/hp-hr.

Detroit Diesel News 14.10.02 ENVIRONMENT

New Automotive MOSFETs from Fairchild

Fairchild Semiconductor has introduced three new 60V N-Channel trench MOSFETs specifically designed for high-current automotive applications such as motor/body load control, ABS, powertrain management and injection systems.

The FDB035AN06A), FDP038AN06A0 and FDD10AN06A0 are the first 60V devices from Fairchild's new range of medium-voltage (60V-150V) PowerTrench products for automotive applications. With their very low gate charge, the required drive current, and therefore the size of the drive circuitry, is reduced.

Fairchild Semiconductor News 3.10.02

Fonix Speech Recognition Software for NEC Microprocessors

NEC Electronics and Fonix have announced that the Fonix Speech Interface Software Solutions now support NEC's highly integrated VR4122 and VR4131 64-bit MIPS-based microprocessors.

The target is automotive applications that can benefit from hands-free operation, such as cell phone dialling,

navigation systems, Internet access, climate control and entertainment functions. Fonix's Neural Network Technology enables accurate speech recognition, particularly in noisy environments, and does not require the user to train his voice to the system. It is well suited to NEC's microprocessors because of their enhanced architecture and support for DSP-type instructions to enable greater speech functionality and performance to end users.

Fonix/NEC News 21.10.02

Fonix Speech Solution for Motorola Telematics Platform

Fonix's Embedded Speech Solution for Automotive, mobileGT, has been integrated with Motorola's total5100 Standard Development Platform.

The mobileGT platform, enables the latest production-ready driver information technology to be created with a single, customisable development environment. By supporting the total5100 standard development platform, Fonix greatly shortens time-to-market for mGT5100-based solutions using voice commands. The Fonix solution allows vehicles occupants to listen and speak to on-board systems such as climate control, Internet or email, radios, virtual dashboards, DVD players etc.

Fonix News 21.10.02

Coral Graphic Display Controller from Fujitsu

Fujitsu Microelectronics America has introduced its 3D 64-bit 200MHz Coral auto graphic display controller at Convergence 2002.

Coral delivers the optimal graphic display capability for map creation, video display and other in-vehicle display applications. It gives OEMs the ability to display various images in PC-like windows. Coral can also re-size inputs for easier viewing. The controller provides support for six layers, supporting four different colour palettes, and incorporates a multiple geometry engine and enhanced video input capabilities. The enhanced bandwidth allows a faster access rate for graphic elements such as polygons and delivers improved scanning functions within the display controller. It also provides powerful alpha mapping.

Fujitsu Microelectronics News 21.10.02

Fingerprint Sensor Developer Kit from Fujitsu

Fujitsu Microelectronics America is demonstrating a new Embedded Developer's Kit at Convergence 2002.

The kit, which combines Fujitsu's MBF200 solid-state fingerprint sensor IC with its FR family of 32-bit microcontrollers, is targeted specifically at security-enhanced automotive applications. The sensor includes an Automatic Finger Detect (AFD) circuit that sends a finger-detect interrupt to the host CPU when a finger is placed on the sensor. This reduces the CPU overhead operations

required when the sensor has to be continually polled for the presence of a fingerprint. Fujitsu also provides a 'minutia-based' matching algorithm with template-to-template match times of approx. 200 microseconds. The FR family of 32-bit MCUs combines the best features of RISC architecture with functional blocks critical to optimised embedded application. It includes peripherals used in embedded application such as CAN, DRAM controller, A/D, Pulse Width Modulations, timers and Universal Asynchronous Receiver Transmitters.

Fujitsu Microelectronics News 21.10.02

Self-Lubricating Elastomer from GE Silicones

GE Silicones has introduced its FSL7586/40 liquid self-lubricating fluorosilicone elastomer to the US automotive market.

The new elastomer is designed for use in gasket and sealing applications both underbonnet and on the powertrain. It can provide improved resistance to both lubricants and fuels and is characterised by a low compression set without need for post-cure operations. FSL7586/40 is a two-component fluorosilicone elastomer that provides reduced insertion force, high curing speed and easy de-mould. It is designed for use in applications such as fuel seals, O-rings, connector grommets and seals, and throttle valve gaskets. The material is available in Europe through GE Bayer Silicones.

GE Silicones News 23.10.02

New Hitachi Processor for Telematics Systems

Hitachi has introduced the SH7760 Camelot SuperH RISC system-on-a-chip (SoC) device, whose performance characteristics and many built-in peripherals are tailored specifically to facilitate the design of the next generation of low- to mid-range telematics products.

The Camelot SoC is based on a proven 32-bit superscaler SH-4 RISC CPU core that executes two instructions simultaneously. The core runs at up to 200MHz and operates with an on-chip cache and RAM to deliver up to 360 MIPS and 1.4 GFLOPS. Telematics system engineers can use this high-speed processing to implement more and better convenience safety features, such as hands-free dialling for cellular communications. The SH-4 CPU core incorporates an on-chip floating-point units (FPU), which eliminates the need for a separate DSP device to run echo cancellation and other signal-processing-intensive middleware in many systems. This enables simpler, smaller, less-expensive telematics system designs.

Hitachi News 21.10.02

Fastest Microcontroller from Hitachi

Hitachi Semiconductor has presented the SH7058F high-speed 32-bit RISC MCU, which has the features and performance needed for advanced embedded control systems for automotive, factory automation and industrial equipment applications.

The SuperH device has the industry's fastest operating frequency, 80MHz, and the largest class on-chip flash memory capacity, 1MB, for a device of this type. The SH7058F delivers 104 MIPS performance to enable it to execute the sophisticated software that yields precise, finely tuned control operation. It also has sufficient memory capacity to store the large code size of such complex software. The MCU is suitable for car engine and transmission control that operates seamlessly while delivering both improved performance and fuel economy. It has an extensive suite of built-in peripheral function, enabling engineers to build high-functionality embedded system with fewer chips.

Hitachi Semiconductor News 14.10.02

Ibiden DPF France Starts Particle Filter Production

Ibiden DPF France, a joint venture formed by Toyota (5%), Saint-Gobain (35%) and Ibiden (65%), has started series production of particulate filters for diesel vehicles.

The Euro 60m plant at Courtenay is the only one in the world devoted solely to producing diesel particulate filters. Output should total 300,000 units in 2003, rising eventually to 1.2m units a year. At present, the plant's only customer is the Peugeot group, whose 607 and 307 diesel models are already fitted with this type of filter. The Ibiden silicon carbide ceramic filter traps 99.9% of fine particles and has a life of 80,000km. An electronic system regenerates the filter, and an additive has to be added to the fuel at each fill-up. Vehicle fitted with the filters are no more polluting than petrol vehicles fitted with 3-way catalysis.

Autoactu 17.10.02 CAPACITY; ENVIRONMENT; INVESTMENTS; JV

New Integrated Microprocessor Solutions from Infineon

Infineon Technologies has introduced two new microcontrollers, the XC167CI-16F40F and the XC164CS-8F40F, which are optimised to balance performance and total cost in automotive and industrial drives and control systems.

The high-integration microcontrollers feature support for Infineon's embedded Flash programme memory and the application-specific peripherals needed of cost-effective motor and transmission controls, high-performance electrical motor drives, robotics and industrial networking applications. The XC167CI-16F40F combines the extended functionality and performance of the C166 V2 core with powerful on-chip peripheral subsystems and on-chip flash memory. The XC164CS-8F40F outperforms existing 16-bit solutions by a factor of 1.5 to 2, and advanced interrupt handling provides real time capability. Applications include future headlamp concepts, synchronous DC motor control and effective power steering solutions.

Infineon News 11.10.02

New Manifold System from Mann + Hummel and BASF

Mann + Hummel, in cooperation with BASF, has developed the first active manifold system in plastic for direct-injection petrol engines.

Series production has started for the new Audi A4 2.0 FSI 4V. The lower and inner parts of the new manifold are made of Ultramid B3WG6. The upper shell, featuring a metallic effect, is visible in the engine compartment and is made to Ultramid B3WG6 Titanium Grey. Both grades are highly heat-stabilised polyamide-6 types with 30% glass fibre. With the FSI (Fuel Stratified Injection) engines, the fuel is injected directly into the combustion chamber, increasing torque and power, and lowering fuel consumption and emissions. The switching active system, patented by Mann + Hummel, consists of two parts: the rotary valve drum with the sealing cage controls the length of the intake pipes and makes for significant improvement in torque and power. The new CVTS (Continuous Variable Tumble System) flange controls the air flow, creating a finely distributed, homogeneous petrol-air mixture in the combustion chamber. The rotary valve drum, sealing cage and parts of the CVTS flange are also made of BASF glass-fibre reinforced Ultramid from.

BASF Press Release 1.10.02

Matsushita Uses Ramtron Memory for Navigation Systems

Matsushita has selected Ramtron International's ferroelectric random access memory (FRAM) for its portable DVD and HDD automotive navigation systems, as well as its 2DIN car audio system.

Ramtron's 16k FM25C160 non-volatile memory will enable Matsushita to offer a navigation system with new levels of precision and convenience with a complete array of recall functions. The fast read/write and high-endurance features of the FRAM provide Matsushita's products with a distinctive resume play function. The FM25C160 stores scene changes and unique user data upon power down, enabling the user to continue where they left off when the unit is powered back up. System board space is saved by eliminating components and allowing a reduced capacitor size, which would not be possible with alternative memory solutions. With the car navigation market growing rapidly and competition fierce, differential at device level is necessary to increase market share.

Matsushita News 30.9.02

Joint Venture for Michelin and Bosch

Michelin and Bosch have set up a joint venture to develop new technologies. At the same time, Michelin is preparing to launch new products.

ISS Integrated Safety Systems will be a 50:50 venture, based in Paris. It will develop a safety system combining the tyre with an electronic vehicle control system.

Michelin has developed a new concept tyre, Proxima, which has a lower mass (1.7kg less than a conventional product) and which offers 25% less rolling resistance than a normal tyre, with no compromise on performance. It has already been tested on the VW CCO prototype. Michelin also has high hopes for its OCP (Optimised Contact Patch system), which enables the wheel to tilt to the inside of a turn in order to maintain maximum adherence in bends.

Autoactu News 11.10.02 JV

eTire CV Tyre Monitoring System from Michelin

Michelin Americas Truck Tires has presented its eTire tyre monitoring system, which provides fleet managers with real-time information needed to maintain peak efficiency and minimise costs.

The eTire system is an integrated system, which incorporates an InTire Sensor, sidewall-mounted SensorDock, Hand-Held or Drive-By Reader and BIB TRACK software to accurately capture and instantly report tyre pressure, wheel position and maintenance information. The InTire Sensor can be attached to any brand of truck tyre, allowing a fleet to monitor and track all of their tyres. The information is then reported in a fleet-specific manner via an Internet server to maintenance managers. The BIB TRACK software can account for retread costs by exchanging information with BIB TREAD, Michelin's retread management software. The Drive-By Readers can immediately differentiate between inner and outer dual tyres and the Hand-Held Readers can easily read both inner and outer duals. eTire can read the operating temperature inside a tyre and correct the pressure reading for 'cold equivalent pressure' rather than the expanding pressure occurring after a tyre has travelled a distance and heated up.

Michelin News 10.10.02

Microsoft Renames Telematics Software Platform

Microsoft is to change the name of its in-vehicle software platform to Windows Automotive from Windows CE for Automotive. The name change marks the introduction of the first Microsoft.NET-connected, voice-enabled software for building next-generation in-vehicle devices.

The platform, available in the first half of 2002, is the first Microsoft telematics software platform designed exclusively for the automotive market to include .NET Compact Framework. This will enable the industry to give drivers and passengers seamless access to a wide range of Web services as well as smooth functionality among all Windows Powered devices. The platform will have native support for voice-enabled Bluetooth technology.

Microsoft News 21.10.02

Microtune to Develop HD Automotive Radio Tuners

Microtune is to develop high-quality, high-performance radio frequency front-end tuners for iBiquity Digital's HD Radio technology for integration into automotive digital receiver products.

Microtune News 21.10.02

New Microcontrollers from Mitsubishi Electric

The Electronic Device Group of Mitsubishi Electric & Electronics USA has introduced three new M16C platform 16-bit MCUs designed specifically for applications requiring networking functionality in the automotive and industrial sectors.

The new flash-based MCUs have high C-code efficiency, industry-leading EMI/EMS performance and are code compatible with other M16C platform MCUs. They are suited to LAN automotive applications. The M16C/1N is a CAN version of the M16C/10. The M16C/6N4 (M306N4) and M16C/6N5 (M306N5) CAN MCUs. The automotive industry is migrating towards flash MCUs as a standard requirement to improve design and manufacturing cycle times. Combining flash ROM on CAN MCUs enables manufacturers to test all electronic functions and make immediate changes if necessary.

Mitsubishi Electric News 21.10.02

New Sound Processors from Mitsubishi Electric

Mitsubishi Electric & Electronics USA has introduced the M6 1556FP pre-driver and M6 1558FP power-driver sound processors for digital audio power amplifiers.

The new chips replace up to eight components in DVD and AV receivers, car audio systems and televisions, and offer over 80% power efficiency. Built for the second stage of digital audio power amplifiers that use N-channel MOSFET power transistors, both processors feature built-in bootstrap diodes and protection circuits to prolong the life of audio components. Both work well with Mitsubishi Electric's M65817AFP digital amplifier processor, which is designed to be the first stage of digital audio power amplifiers.

Mitsubishi Electric News 21.10.02

New 32-Bit Automotive MCUs from Mitsubishi Electric

The Electronic Device Group of Mitsubishi Electric & Electronics USA has introduced two M32R/ECU 32-bit microcontrollers designed for high-end CAN automotive applications, such as engine control, airbag system and EV (motor control).

The devices, seen as a cost-effective, high-performance alternative to microprocessors, offer up to 1 Mbyte of flash memory, the industry's largest flash capacity. The

M32R/ECU#5 and M32R/ECU#5HL incorporate a more advanced M32R floating point unit core, boost clock speed up to 80MHz and operate from 140 to +125deg C. The FPU greatly boosts the operation-speed performance, reducing single-precision instruction time by 95% and cutting in half the execution time of double-precision instruction, compared with previous-generation devices. The M32R-FPU core supports a wide logical address

space of 4 Gbytes without requiring segment switching, thus resulting in higher computational efficiency.

Mitsubishi Electric News 2.10.02

Symphony Digital Radio Chipset from Motorola

Motorola's Semiconductor Products sector has developed a new digital radio technology that enhances sound quality and improves signal reception for existing AM and FM analogue broadcasts.

Designed for home and automotive stereo systems, Motorola's Symphony Digital Radio Chipset implements the new technology. Benefits include: less static, fading, pops and hisses; automatic tuning; extended listening range from existing signals; and overall improved audio clarity and volume. The technology enables listeners to hear more stations, whether at home or on the road, tune to more remote stations with greater ease and enjoy higher quality sound. Broadcasters do not have to buy new digital broadcast equipment, and consumers do not have to pay a monthly subscription fee. At present, there are an estimated 800m analogue radios in cars and alarm clocks, boom boxes and PCs in the US. Allied Business Intelligence forecasts that shipments of digital radio receivers in the US will increase from 650,000 unit sin 2002 to over 33m in 2007.

Motorola News 1.10.02

Voice Enabled Map Data from Navigation Technologies

Navigation Technologies has announced that voice transcriptions of its US NAVTECH map database are now available.

NAVTECH Voice Data increases the functionality of navigation systems by reducing recognition complexities, improving output accuracy and expanding the system use beyond basic commands. NAVTECH Voice Data is currently available for the company's map databases for Italy, Germany and the UK. The system uses text-to-speech and automated speech recognition to interpret abbreviations, alternative pronunciations and other variants.

Navigation Technologies News 30.10.02

Real-Time Traffic Solution from Navigation Technologies

At the 9th World Congress on Intelligent Transport Systems, Navigation Technologies is to demonstrate its real-time traffic solution, which provides in-vehicle incident and traffic flow information for major roadways in Chicago.

The demonstration uses many industry partners, including XM Satellite Radio, Alpine Electronic, Pioneer Electronics and TrafficCast, for content, delivery and in-vehicle systems. Navigation Technologies' approach creates an inclusive platform for the aggregation of multiple sources of traffic information from incident and flow to weather and events. The information is combined and merged with NAVTECH map data and delivered to the in-vehicle navigation system through a wireless signal. Based on its experience in Europe and Japan, Navigation Technologies believes that traffic information will increase daily use of navigation.

Navigation Technologies News 14.10.02

Navox Voice and Data Modems for Telematics

Navox has announced the availability of its audio-band voice and data models for the telematics market at Convergence 2002.

The products and technology allow telematics, fleet tracking and asset management providers to transmit data and voice simultaneously across any cellular technology. Navox uses its simultaneous voice and data (SVD) technology in all of its audio-band voice and data modems. The technology separates the data and voice so the data signal is not heard by parties engaged in the conversation and the data transmission is not affected by the audio conversation. The modems allow voice and data to be transmitted between a digital or analogue cellular handset and a Public Switched Telephone Network (PSTN) based call centre. The key advantage is that data can be transmitted over any cellular technology. Navox has a manufacturing agreement with Chapman Technologies, under which Solectron, Navox's parent company, will provide manufacturing, repair, logistics and contact centre services for Chapman's new automotive produces.

Navox News 22.10.02

New Microcontollers from NEC

NEC Electronics has introduced its new 32-bit V850ES/Sx2 subseries microcontrollers designed for the automotive audio market.

Powered by NEC's V850ES RISC CPU core, the devices offer performance levels up to four times higher than the 16-bit controllers used currently in high-performance car audio systems. The new microcontrollers also feature up to 640KB of flash or ROM and 48KB of RAM. The higher memory capacities can accommodate the large file systems necessary to support formats such as MP3 and

Windows Media Audio. The microcontrollers also offer on-chip CAN and J1850 bus controllers for integrated connectivity to automotive networks.

NEC News 21.10.02

New NEC Microcontrollers for Safety Applications

NEC Electronics has introduced the Kx1 and Fx2 series microcontrollers for automotive applications.

The Kx1 series comprises the 8-bit 78K0/Kx1 and 32-bit V850ES/Kx1 subseries, which employ the same registers and software to support identical peripherals and implement LIN-capable universal UARTs. All the devices have failsafe circuitry, with an on-chip ring oscillator, clock monitor, power-on clear/power-on reset circuits and low-voltage indicator, making them ideal for safety-critical applications, ranging from door and mirror controls to high-end safety equipment such as passive occupancy detection systems.

NEC News 21.10.02

ROMless Microcontroller from NEC for Dashboards

NEC Electronics has introduced a new 32-bit V850E/CA2 microcontroller for automotive applications.

With up to four full CAN interfaces and a comprehensive set of peripherals, the highly scalable microcontroller is suitable for applications such as high-end body electronics, gateways and future re-configurable (virtual) dashboards. The controller offers a design without ROM and 4KB of embedded cache optimised for the connection of external flash memory, enabling the product to support applications such as graphics-intensive dashboards. Other features include a 12 x 10-bit A/D converter, a timer unit with five 16-bit timers, a watch timer and watchdog timer, two UARTs, an interrupt controller and a separate spread-spectrum PLL for CPU operation.

NEC News 21.10.02

DC/AC Inverter from Omron

Omron Automotive Electronics is introducing to the North American automotive market the first 150 watt DC/AC inverter to power in-vehicle devices such as TVs, VCRs, PCs and peripherals, infotainment systems and video games.

The inverter is a compact, lightweight unit offering enhanced safety features. It will be available to North American vehicle producers for the 2004 model year. It is compatible with many North America vehicles already offering 115-volt AC outlets as standard. The inverter meets rigid OEM power and performance requirements to provide maximum protection against radio interference, electrical fire and other vehicle damage. Additional technical features include: a warning and attention buzzer to alert that the battery is losing power; a design that minimises electro-magnetic interference; added protection

against short circuits; greater protection against shocks than most household circuitry; low key-off current to reduce battery drain; optional switch enable input that allows driver to turn devices on and off from a switch the driver can control; and an LED light output that allows the driver to see if the unit is on or in and overload or other fault condition.

Omron News 21.10.02

Driver Vision Camera from Omron

Omron Automotive Electronics has presented the industry's first high-performance miniature CMOS camera to enhance advanced driver assistance systems at Convergence 2002.

The High Dynamic Range CMOS (HDRC) camera is in the prototype stage and is expected to appear on cars and trucks by the latter part of the decade. The HDRC camera provides benefits that vehicle cameras have been unable to offer until now. It provides vision similar to the human eye and provides images necessary to enhance the safety and convenience of those inside and outside the vehicle. The camera uses logarithmic conversion of optical images affected by high and low light levels, such as objects positioned directly in front of dazzling sunlight or when entering or exiting tunnels, into clear electrical images that allow an advanced driver assistance system to function throughout a wide range of light levels. It has superior near-infrared region sensitivity so that it can detect objects outside the night-time headlight range. The camera can be installed in places around the vehicle to provide better overall vision and greater safety.

Omron News 21.10.02

VersaMat Insulating Material from Owens Corning

Owens Corning (OC) is enhancing its portfolio of interior acoustics products with an increased focus on the VersaMat thermal and acoustic insulating material range.

OC Automotive plans to provide composite solutions using VersaMat technology in applications such as headliners, door panels, underbonnet applications, boot storage systems and under-carpet heatshields. VersaMat is already being used by North American producers in limited capacity on platforms such as the Ford Ranger, the Jeep Liberty, Honda Civic and GM Saturn. OC is also offering VersaMat in the European automotive market. VersaMat can be tuned to customers' acoustic requirements by modifying the fibre formulation and density of the finished mat. It is suitable for basically all absorbers in the car, combining excellent acoustics with temperature resistance, weatherability and low weight. During the moulding process, the thermal and acoustic insulating material forms a semi-structural system that allows it to carry its own weight along with the electronics and duct work of an overhead system.

Owens Corning News 9.10.02

7in TFT Display from Philips

Philips has presented a new 7in TFT (thin-film-transistor) display designed specifically for use in automotive rear-seat entertainment systems and portable, CE-compatible DVD players.

The new TFT is the industry's first automotive monitor suitable for handling the digital interface between the YUV (YCrCb)-format DVD output and the display, offering unprecedented contrast and colour to optimise the performance and value of in-vehicle entertainment systems. The TFT monitor with inverter includes the digital YUV interface, a stable image for video and gaming, and an optional CE low-power backlight.

According to Strategy Analytics, the rear-seat entertainment market for factor- and dealer-installed products will rise from around 250,000 units in 2002 to 1.6m by 2006. The growth will be driven by demand in the US.

Philips News 21.10.02

New Tyre Pressure Monitoring System Chip from Philips

Philips has launched a new chip solution for the direct measurement of tyre pressure and identification.

The new signal conditioning chip, P2SC, will boost safety in the car by communicating whether tyre pressures are at their correct level and will increase convenience for the driver by reducing the need for regular manual checking of tyre pressure. Direct measurement provides a much more accurate indication of tyre pressure than is possible with an indirect measurement system, with the advantage that the signal is always available even when the car is parked. P2SC provides the link between the tyre module and the driver interface, enabling early warning of incorrect pressure. The wireless link of the chip solutions uses Philips' Passive Keyless Entry RFID technology and is already field proven and qualified for automotive use. Philips is the market leader for integrated keyless entry and immobilisation systems which use the same technology as the tyre pressure monitoring systems.

Philips News 14.10.02

Satamatics Starts Production of Next-Generation Terminals

Satamatics in the UK has established a partnership with DDi Technologies for the production, design and manufacture of its next-generation intelligent satellite data terminal.

Merging telematics with satellite technology enables Satamatics telematics systems to gather and report information pertaining to any and all measurable parameters in connection with real-time global monitoring, tracking and control of cars, trucks, trains, ships etc. The new terminal bundles sensor ports, GPS positioning, messaging, communications and data processing capabilities into a single lightweight package the size of a paperback book. The first production-run

features will include: multiple and configurable input/output options for remote control, sensing and monitoring applications; powerful scripting language for developing specific applications; low operating power consumption; integrated battery power for stand-alone operation; and modular design for flexible antenna and power pack configurations.

Satamatics News 1.10.02

Cockpit Concept from SiemensVDO

SiemensVDO Automotive is demonstrating a cockpit concept at Convergence 2002, which illustrates the refreshing design, high-quality materials, intelligent technology and ergonomically optimised control system characteristics future cockpit systems are expected to employ.

Along with mobile Internet access, the concept features smooth and clear surface areas interrupted only by a main controller and the required hazard lights switch. All main functions are controlled directly from the steering wheel through integrated, two-barrel, thumb level switches developed in cooperation with Telenostra. Drivers can easily navigate on-board systems menus by manipulating a cylindrical switch that moves a cursor in corresponding directions. The design allows drivers to maintain better focus on the road and promotes the elimination of unnecessary distractions. Turn signals and hazard light switches are relocated to integrated finger trays on the back of the steering wheel. Column-mounted instrument stalks are eliminated by using a rain sensor to activate windscreen wipers, a running light assistant to control headlights and moving the interior illumination controls to the driver-side door.

The next generation of safety features is also included. To help drivers stay alert, the on-board computer gives the steering wheel a shake when it recognises a potentially dangerous situation, such as an excessive increase in speed or lane drift. A rotating tactile feedback knob on the centre console controls infotainment functions. The 10in monitor gives the driver access to a variety of functions through an intuitively navigated menu interface. The seamlessly integrated surface speakers convert the cockpit into a large-area speaker membrane, using small exciters hidden on the inside of the cockpit to cause large areas, such as air ducts and the instrument panel, to vibrate creating sound.

SiemensVDO Automotive News 22.10.02

SiemensVDO Augmented Reality Navigation

SiemensVDO Automotive is developing augmented reality for vehicle navigation systems of the future.

At Convergence 2002, the company is presenting a video demonstration of an actual driving experience using augmented reality navigation technology, developed with Siemens Corporate Technology. The technology will be able to overlay navigation instructions onto a video image

of a real road, further improving a driver's orientation in complex traffic situations. The new augmented reality navigation systems is being designed to improve the human machine interface and reduce distractions to the driver, particularly during highly distractive situations. Augmented reality fuses real world and computer-created virtual images in a simultaneous display. On a display, a driver would see computer-added guidance indications, much like a 3D arrow, on a camera-produced image of the actual surroundings. There will no longer be a need to translate what is seen through the windscreen to the information displayed on a conventional navigation screen. The real-time traffic situation is recorded via a video camera behind the interior rear-view mirror.

SiemensVDO News 22.10.02

New Generation of Immobilisers from SiemensVDO

SiemensVDO Automotive's new generation of cryptographic vehicle immobilisation technology has approximately 1tn different encrypted security code combinations.

The immobiliser features a crypto transponder and symmetrical (two-way) encryption. It transmits a random number to the transponder, which encrypts it using a code specific to the vehicle, then transmits the result back to the departure control. Simultaneously, the same process occurs in the ECU, which compares the results and only allows the engine to start when the codes are identical. The code cannot be intercepted or read by the scanning equipment often used by profession car thieves. The system also incorporates Remote Keyless Entry and tyre pressure monitoring systems into a single package. The three-in-one immobiliser-based solution eliminates two extra sets of antennas by using a single array to send and receive wireless data required by the three separate system, reducing cost, weight and size compared with traditional component solutions.

SiemensVDO News 21.10.02

SiemensVDO Active Noise Control Technology

SiemensVDO Automotive is presenting its Active Noise Control (ANC) technology on demonstration vehicles and interactive exhibits at Convergence 2002.

SiemensVDO Automotive ANC is an electronic solution which replaces mechanical products. The technology allows engine sound to be actively influenced at its source by using a loudspeaker installed in the air intake system to generate opposing frequencies. It also uses a microphone mounted in the air intake system to continuously monitor and measure sound levels at various established thresholds. An electronic controller calculates the corresponding tone sequence, which is delivered into the intake system by the speaker. The technology gives vehicle producer greater freedom in engine acoustics design.

SiemensVDO News 21.10.02

SiemensVDO TFT Instrument Cluster for Audi A8

SiemensVDO Automotive has developed the first car instrument cluster with 5in thin-film transistor (TFT) display for the new Audi A8.

The new technology paves the way for greater freedom for graphics and design. The highlight of the cluster, which has five display levels, chrome rings and wood surround, is the large display between the two dominant tubes for engine revs and speed. With a clear colour allocation to the key groups of the new multimedia interface, the most important information from the on-board computer, navigation system, radio, telephone and autonomous cruise control are displayed on the centre console at the press of a button in the centre of the driver's line of sight. Every one of the 320 x 240 pixels in the TFT display is driven in the three primary colours red, green, blue, with a dedicated transistor, giving the system a previously unknown brilliance and precision in the display of colours and forms. The display appears three dimensional.

SiemensVDO Press Release 26.9.02

Solutia Vanceva Color for European Market

Solutia Automotive has made its Vanceva Color interlayer for automotive laminated glazing available in Europe.

Interlayer has been featured on several concept and production vehicles presented during 2002. It is on the roofs of the Porsche Targa 911 and Volvo XC70 and on concept cars such as the Pontiac Solstice, Ford GT40 and GMC Terra 4. The product provides OEMs with freedom to think beyond the traditional uses of automotive glass. It provides a unique way to differentiate brands through glazing, without compromising the solar, security, sound and safety aspects of EPG and windscreens. The new offering includes three colour-level options: the traditional palette of eight colours commonly used in the industry; the premium palette of 54 colours; and the custom colours.

Solutia News 29.10.02

High-Strength Magnesium Alloy Pipe from Sumitomo Electric

Sumitomo Electric Industries has developed a high-strength magnesium alloy pipe that is 20% stronger than extruded magnesium alloy bars.

The strength and light weight of the pipe make it suitable for use in a wide range of applications, including automotive. For the time being, Sumitomo expects demand for the pipe for use as a substitute for high value-added materials that use carbon fibre reinforced plastic. The alloy can shield against electromagnetic interference, has excellent damping properties and can be easily recyclable. Cross sections can be oval, square or other non-round shapes.

Sumitomo Electric News 28.10.02

TI and Mindready Control and Information Systems Platform

Texas Instruments and Mindready Solutions have developed the industry's first reference platform for designing automotive control and information systems that interface through the IDB-1394 high-speed serial bus.

The platform will reduce time to market for next-generation multimedia networks. It will allow easy integration of DVD video players, navigation systems, digital video cameras, portable storage devices and other elements for advanced automotive multimedia networks.

The platform features the second-generation from TI's ceLynx family, the TSB43CA43A link layer IC, which transfers high sample-rate digital audio data between A/V receivers and DVD-audio/Super Audio CD players. It also supports digital transmission content protection, which is required to send DVD video or audio on automotive networks. Renault is the first customer to adopt the platform.

Texas Instruments News 21.10.02

Prospects for Torvec Products

Torvec is taking its next step towards the commercialisation of its products.

Torvec's generation III infinitely variable transmission (IVT) has now been specifically designed for a vehicle and will be adapted to a 2003 Dodge Ram 3/4-ton 4x4 quad cab pick-up. The truck will have the electronically controlled 2004 emissions-compliant Cummins 5.9L 240bhp turbodiesel engine. Torvec chose this engine size because it represents a sizeable market for SUVs, light trucks, delivery trucks, school buses, airport shuttle buses and Class 3 to 5 trucks. Torvec's IVT in this application could double city mileage and remove up to 90% of diesel particulates.

Torvec News 8.10.02 ENVIRONMENT

Multi-Language Speech Synthesis Middleware from Toshiba

Toshiba has developed a speech synthesis middleware that covers nine languages, delivering text-to-speech with a clarity and natural intonation that imitates the human voice.

The nine languages are Japanese, American English, British English, French, German, Spanish, Italian, Dutch and Mandarin Chinese. The middleware is suitable for incorporation in car navigation systems and PDAs as it makes limited demands on memory and processing power. With the world market for car navigation systems expanding rapidly, the new system is expected to prove particularly attractive to producers in Europe, who can use the same middleware in systems for different countries.

Toshiba News 4.10.02

Valeo Applies Domain Approach to Access and Security

Valeo has announced that the adoption of its Domains approach has enabled it to achieve significant market success for several new vehicle systems.

In the Vehicle Access and Security Domain, Valeo's focus on satisfying consumer needs for more convenient, safety and secure vehicle access has resulted in collaboration with Renault to design the keyless entry and ignition system which features on the Renault Laguna II, Vel Satis and Espace IV. In the same Domain, Valeo has pioneered the development of a cost-effective electrically powered boot closure system, which was first seen on the Mercedes-Benz E-Class. Powered Closure Systems represent a key Valeo competence in a sector that is expected to show significant growth. The boot closure system operates automatically, by remote control or push buttons on the boot and in the driver door. The system features a speed and position control function that allows producers to adjust the operation of the system to meet individual requirements. The Keyless Entry and Ignition system provides safe and secure automatic access to doors, boot and ignition. It uses smart-card owner recognition technology and also memorises the personal settings of interior features including seats, mirrors, radio and air conditioning.

Valeo News Release 9.10.02

Valeo Develops Driver Attention Simulator

Valeo has developed an advanced automotive simulator to optimise driver attention on the road.

The re-configurable eye and hand monitoring driving simulator for human machine interface applications, DAS (Driver Attention Simulator), has been developed in response to the increasing number of comfort and communication features being introduced, which compete for the driver's attention and have the potential to distract attention from the road. The investment in the simulation tool has been driven by Valeo's extensive HVAC system development activity that support the company's position as the leading supplier in Europe. Valeo HVAC systems now contain more personalised comfort features for vehicle occupants, including individually adjustable air temperature controls, multi-zone switches, air-cleaning and fragrance diffusion systems.

Valeo News Release 8.10.02

New Power Line Technology from Valeo

Valeo has presented powerful power line technology with high potential. The application of an advanced data communications technology based on power line technology could be the first time this technology has been employed in the automotive sector.

The power line communication is a new and efficient way of communicating electronic data throughout the vehicle.

Through a simplified electrical architecture, power line communication offers car producers the opportunity to reduce costs and weight, increase reliability and flexibility as well as achieve space savings. Power line communication, which is expected to be introduced on cars from around 2006, meets the growing demand for wiring systems that can cope with the future addition of more electronics features without the need to add complexity to the electrical network. Using signal modulation to communicate data across the same wires that already supply power to the on-board electronics, power line communication works in a similar fashion and offers the same benefits as multiplex systems. In door modules, the system further reduces the number of wire and increases the reliability of the electronics functions. Door modules and lighting systems are expected to be among the first applications.

Valeo News Release 7.10.02

Battery Management and Disconnect Unit from Valeo

Valeo is claiming a breakthrough in the optimisation of battery performance and electrical system reliability, in both 42-volt and 14-volt electrical networks, with its new Battery Management & Disconnect Unit.

The unit is compatible with a wide range of vehicle applications and offers benefits to car producers and consumers in the form of improved vehicle reliability, enhanced occupant safety and battery life and condition optimisation. The unit is a stand-alone ECU installed in-line on the positive battery cable. The proprietary electronics perform battery state-of-charge, state-of-health and diagnostic monitoring in order to optimise battery life and performance. A current sensor and a programmable microcontroller are at the heart of the unit. They ensure that the battery is in a high state of charge and protected from quiescent drain and discharge in use. In the event of a serious accident that results in the deployment of the airbag systems, the potential hazard caused by a damaged electrical system is minimised. A signal from the on-board crash sensor to the unit automatically disconnects the battery in less than 5 milliseconds, thus preventing an electrical source from short circuits in the electrical system. The disconnect feature provides automatic protection of the car network in in case of faulty operation, such as reverse battery jump start.

Valeo Press Release 4.10.02

Valeo's E-Module Concept

Valeo has presented its e-module concept that offers vehicle producers an innovative, flexible and cost-effective design solution to the integration issues caused by the increasing number of electrical, electronics and mechanical features specified on new vehicle platforms.

Valeo is concentrating first on meeting a need among car producers for innovative rear closure systems and components that address integration issues early on in the design stage. The design and functionality of rear closure plays a pivotal role in model differentiation. The concept

allows car makers to specify customised sub-modules, which use proven components for various generate functions.

The major electrical/electronic components that may be specified and located in the rear zone of a vehicle and which may be grouped into e-modules are: the ERST rear wiper motor; centre high-mounted stop lamp; harness; multiplex electronic controller; antennas; wipe/wash sensor; flip glass e-latch; e-handles (tailgate and flip-glass); licence plate lighting; rear-view camera; cargo lights; reversing lights; rear keyless access system; rear powered opening and closing. The concept will also support the integration of future traffic environment sensing systems and will be expanded by smart control of the various embedded components, such as through the inclusion of a multiplex control unit. An advanced rear lighting system, which, depending on the deceleration of the vehicle, changes the perceived light intensity of an LED-based CHMSL, could also be integrated.

Valeo Press Release 4.10.02

Detection Systems Contracts for Valeo

Valeo's parking slot measurement system has been selected by two European car producers and is to be installed on several future models, starting in 2004.

The parking space measurement system, significantly enhances comfort and confidence for parallel parking. The system uses Valeo's Ultrasonic Park-Assist (UPA) technology. It consists of two ultrasonic sensors similar to those used in the current UPA system. The sensors are integrated into the left and right hand side of the front bumper of the car and communicates the information to the driver via existing visual displays on the dashboard. It can evaluate the length of the space chosen and perform an accurate comparison with the length of the driver's car to indicate if the car will fit into the space. The are future plans to combine information from Valeo's advanced steering angle sensor with the parking slot and UPA systems to instruct the driver of optimal steering torque and timing during parking manoeuvres.

Valeo News 1.10.02

Valeo and Ricardo Present Hybrid Diesel

Valeo and Ricardo have presented their hybrid diesel car which has a 42-volt electric motor.

Compared with the diesel only version, the hybrid Opel Corsa, has average fuel consumption of 4L/100km, a fall of 20%, and 30-35% lower CO2 emissions. The motor's flywheel is wrapped round the electric circuit and the 42-volt generator serves as a battery, enabling a considerable reduction in weight. The system is seen as attractive to European producers as it would cost only an additional \$1,000 per vehicle.

The Economist 28.9.02 ENVIRONMENT

In-Vehicle Wireless System from Visteon and Aether Systems

Visteon and Aether Systems have teamed up to deliver the first fully automated in-vehicle wireless system for law enforcement.

Using the Visteon/Aether solution, officers can check backgrounds, run tags and receive critical information without ever having to take their eyes off the road or hands off the steering wheel, enhancing offers safety and performance. The companies have integrated Aether's PacketCluster Patrol mobile data application with Visteon's TACNET system, which maximises police cruiser space by clearing the airbag path and reducing electronic equipment in the passenger compartment. This allows officers to perform voice-activated queries of the NCIC and other databases, with the result projected directly on a HUD screen.

Visteon News 7.10.02

Brake Wear Sensors from Wabco

Wabco has developed a brake shoe wear detection system, which enables users of trailers and semi-trailers fitted with the company's EBS system to know the state of wear at all times. The driver is alerted via four series of four blinking lights on the EBS warning light.

Autoindustria 3.10.02

New Automotive Chips from Xilinx

Xilinx has added two new intelligent devices to its range of automotive chips, developed specifically for the telematics market.

Xilinx IQ Solutions are now available for Xilinx's lowest cost Spartan-II FPGA series and its lowest power CoolRunner CPLDs. The range is designed specifically for architecting automotive intelligence and infotainment products into the vehicle cab at extended operating temperatures. The new IQ solutions provide faster time-to-market for vehicle manufacturers and consumers will benefit from the reconfigurable nature of the chips. The chips can even be updated after the vehicle has left the dealership. By extending the range to include Spartan-II FPGAs, it allows use of the MicroBlaze processor, the world's fastest 32-bit soft processor core for FPGAs. By adding the ultra-low power CoolRunner CPLDs, designers can benefit from the industry's highest performance and ultra low power CPLD. The next generation of cars will employ 'always on' systems to monitor the health of the car and allow for more sophisticated security systems.

Xilinx News 21.10.02

Programmable Telematics Solution from Xilinx and Acunia

Xilinx and Acunia have announced the availability of CarCube, a ready-made cost-effective field upgradeable design platform for automotive telematics.

Based on the Xilinx Spartan-II and CoolRunner-II programmable chips, CarCube provides the time-to-market advantages afforded by programmable logic, while supporting mainstream automotive interfaces, such as CAN and USB. Applications range from robust security services to in-vehicle video and audio entertainment. Based on Acunia's Xingu technology, CarCube features a Xilinx Sparta-II FPGA as a flexible companion chip for the Intel Xscale 80200 processor, a Xilinx CoolRunner-II low power CPLD and up to 128MB of SDRAM and 16MB of on-board flash. CarCube features a complete multimedia telematics platform that includes: GSM voice and data, GPRS data, GPS with dead reckoning, high-performance data and video capabilities, USB and CAN connectivity, mass storage support, audio interfaces, and a HMI unit with touchscreen and programmable buttons.

Xilinx/Acunia News 21.10.02

Next-Generation Optical Data Transmission from Yazaki

In cooperation with key partners, Yazaki has developed a high-performance glass fibre-based optical data transmission system for the automotive industry, which promises a fivefold increase in bandwidth and a 50 times reduction in signal attenuation, compared with current plastic optical fibre (POF) systems.

The Yazaki PCS (polymer-clad silica) Optical Communications System combines Yazaki's high-performance connector technology with PCS fibre and vertical cavity surface emitting lasers (VCSEL) to provide the increases in performance needed to meet future requirements for greater bandwidth, communication speed and better environmental performance. Unlike other applications, automotive systems need to function flawlessly in aggressive environments. PCS fibre offers exceptional heat resistance and 'superb' flexibility, providing unprecedented opportunities to route long lengths of fibre through high temperature areas and in more complex configurations. The system would enable the use of optically connected, forward-looking video cameras or radar, with fibre routed through the engine compartment to control units or displays in the passenger compartment. Rear seat entertainment systems offering multiple channels for multiple users, Internet connectivity to an on-board PC and other applications might require routing through the headliner. Future applications could also include collision anticipation and avoidance systems, x-by-wire, image processing, video displays etc.

Yazaki News 21.10.02

CONTRACTS AND AWARDS

AMD Selects SiRF GPS Chipset

Advanced Micro Devices (AMD) has selected SiRF's SiRFstarlit GPS chipset for the new AMD Alchemy Solutions Information Reference Design Kit.

The Au1500 processor is part of the AMD Alchemy Solutions processor family of high-performance, low-power, high-integration system-on-a-chip solutions, optimised for personal connectivity devices such as navigation/telematics systems. The technology addresses the increasing requirement for closer integration between the CPU and GPS driven by demand for increasingly sophisticated entertainment and information systems. SiRFstarlit is built around the SiRF 12-channel GPS core, which features host-based integration, allowing the user to share memory and computational resources between the host Au1500 processor and the GPS receiver, saving cost without affecting performance.

SiRF News 22.10.02

Amerigon Climate Control Seat on Infiniti M45

Amerigon is supplying its Climate Control Seat (CCS) to Nissan as an option on the all-new 2003 Infiniti M45.

The M45 is the first Nissan vehicle to include CCS as either an option or a standard feature. It is offered as part of the premium equipment package which includes the Infiniti Voice Recognition system.

Amerigon News 10.10.02

New Contract for ArvinMeritor

ArvinMeritor has not disclosed the name of the vehicle producer which has awarded it a contract to supply front suspension modules worth \$300m.

The Light Vehicle Systems division is to develop and supply three new front suspension modules. Production will start in July 2004 in Detroit. ArvinMeritor is expecting its turnover to rise by 10% a year from the present level of \$7bn. Profit is expected to rise by 15% a year. In Poland, the new Poznan plant is to produce door modules for a new VW model. In France, the company is building a new plant at Sully-sur-Loire near Orleans, which will start operations early in 2003 and will assemble door modules.

Autoactu 30.9.02 CAPACITY; CONTRACTS

Toyota Mobile Video Contract for Audiovox

Audiovox Electronics Corp (AEC) has been awarded a contract by Toyota Motor Sales in the US to supply mobile video systems for the 2003 Highlander and the all-new 4Runner SUV.

The mobile video products will consist of a 7in overhead LCD screen assembly, roof-mounted, with console-mounted DVD player and a remote control unit. The systems will be installed either at Toyota port facilities or dealers.

Audiovox News 1.10.02

Ballard Fuel Cell Engines for Mercedes-Benz Demonstrators

Ballard Power Systems is supplying fuel cell engines to two next-generation DaimlerChrysler fuel cell vehicles.

DaimlerChrysler intends to introduce 60 Mercedes-Benz A-Class F-Cell vehicles, which will be introduced in limited customer fleets in Europe, Japan, Singapore and the US, starting in 2003. The A-Class F-Cell vehicles are the group's first fuel cell cars to move from the research stage to customer demonstrations. Ballard's latest generation 85kW automotive fuel cell engine has a higher net power output which, combined with lower weight and volume, results in a 60% improvement in power density over previous generation technology. This has also reduced systems complexity, improved vehicle integration and lowered costs. DaimlerChrysler has also demonstrated the Citaro city bus and Hermes Sprinter van, both powered by Ballard fuel cell engines. Ballard will continue to deliver heavy-duty fuel cell engines in 2003 for 30 Citaro buses to be operated in ten major European cities.

Ballard News 7.10.02 ENVIRONMENT

BASF Supplies Plastic for Roof Rail Mounts for Peugeot Models

BASF is supplying plastic for the roof rail mounts for the Peugeot 307 SW and 206 SW.

The roof rails are attached at just two points, eliminating the usual centre spar. The mountings feature two BASF plastics, Ultradur B 4040 G6 (PBT) for the foot and Luran S 778T (ASA) for the trim. Plastic was chosen because it is cheaper, lighter and offers more design freedom than metal. The feet can support loads of up to 100kg with an acceleration up to 4G. They are able to withstand high stresses, particularly on uneven roads. The painted aluminium profile roof rails are supplied by Aries of Poissy.

BASF Press Release 18.10.02

BASF PFM-System for New Smart Roof

BASF's PFM-system is being used by ArvinMeritor in Gifhorn, Germany, to produce an integrated roof module for the MCC Smart car.

The roof module comprises a high-gloss black laminated plastic panel housing a black-tinted sliding glass sunroof. The key to achieving a Class A surface finish on the non-painted part is the BASF paintless film moulding (PFM-System), which meets all requirements regarding chemical resistance, weathering, heat deformation, scratch resistance and gloss. BASF also supplies the film material. Other companies involved in the project are: Elastogran with its Elastoflex PU structural foam system; Senoplast Klepsch which makes the Senotop high-gloss film; and Roehm Formmassen (part of Degussa), which supplies the PMMA-lidding laminate. The module is the first large body part in which glass and plastic with similar stylistic characteristics have been combined to produce a high-

quality painted appearance. It is made by thermoforming the PFM film-a coextrusion of BASF Luran, capped with two layers of PMMA from Roehm's Plexiglas models, to the shape of the roof and injecting onto its inside surface a layer of Elastoflex.

BASF News Release 11.10.02

Blaupunkt MP3 on 2003 Ford Focus

Blaupunkt is supplying its MP3 Radio to several versions of the 2003 Ford Focus, providing driver with premium sound quality in AM/FM or CD/MP3 mode, through the use of the integrated equaliser.

The system can play as many as 250 songs from a single CD. Individual equalisation profiles are available for different types of music and drivers can personalise their radios to their individual preference based on their musical tastes. The unit offers 80 watts of total power. The Focus is Blaupunkt's first North American OE MP3 application.

Blaupunkt News 18.10.02

BorgWarner Intelligent Torque Management on Hyundai Santa Fe

The first application of BorgWarner TorqTransfer System's Interactive Torque Management I system (ITM-I) is on the Hyundai Santa Fe in the US.

The system will provide maximum performance and enhanced security in on-demand 4WD. Volumes are expected to exceed 1m units. The ITM-I system uses sensors and microcomputer controls to sense slippage in a vehicle's front wheels and automatically transfers power to the rear wheels. When the front wheels are no longer slipping, the system reduces or eliminates power to the rear wheels. Because ITM-I is fully interactive, it can work with other systems such as ABS and electronic stability programmes to further enhance traction and stability. Because it is an integrated, self-contained system, it provides greater reliability and durability while lowering weight and cost. Production of the system has started at BorgWarner TorqTransfer Systems' plant in Seneca, South Carolina.

BorgWarner News 7.10.02

Brose One-Touch Up for Cadillac XLR

Brose North America is to supply an industry first One-Touch UP window regulator to GM for the 2004 Cadillac XLR, its new luxury roadster.

Brose North America has integrated a door zone control module with its One-Touch Up technology to meet the specific design needs of the XLR's retractable hardtop design and headerless doors. The integrated door zone integrator features indexing, which slightly lowers the glass when the door switch is touched, releasing the window glass from the XLR's retractable hardtop seal, allowing the door to open and close. In addition to window functions, the integrated door zone control module controls switch and convenience lighting, lock indicator, mirrors and communication with the power

retracting hardtop. One-Touch Up monitors window regulator motor speed and direction by utilising an indirect detection system. If an obstacle enters the path of the automatically closing window, a force of more than 100N triggers the motor to reverse. The system includes provisions to avoid mis-reversal under irregular road conditions, hardened circuitry to protect against sudden voltage drops or changes in dynamic voltage and smart thermal over overload protection to minimise motor overheating.

Brose News 30.9.02

Canadian General-Tower Supplies Coverstock for Honda Accord

Canadian General-Tower (CGT) is supplying TPO coverstock to Honda of America for the all-new 2003 Accord.

CGT is supplying a TPO top skin for the instrument panel of all versions of the Accord. Honda expects sales of the Accord to continue exceeding 400,000 units a year. CGT already supplies a TPO instrument panel coverstock for the current Honda Civic. CGT's environmentally friendly TPO products offer performance improvements compared with PVC such as ageing and weather durability, improved fog/heat resistance, UV performance, low temperature performance and high temperature performance in moulding, as well as lower weight/unit thickness.

CGT News 30.9.02

Toyota Supplier Award for Collins & Aikman

Collins & Aikman has received Toyota Motor Sales USA's Toyota Quality Alliance Gold Award in recognition of supplier excellence.

Collins & Aikman won the award specifically for its accessory floor mat, cargo mat and boot mat products, which are produced at its Holmesville and Canton, Ohio, plants. The company currently supplies accessory mat products for the Avalon, Camry, Echo, Highlander, Prius, RAV4, Sienna and new 4Runner models, and most of the Lexus models.

Collins & Aikman News 10.10.02

GM Contract for Continental Teves

Continental Teves' Temic unit has won a contract to supply end gate modules to GM for the 2004 GMC Envoy XUV.

The modules will control a number of functions, including movable glass in the end gate, as well as latches, wiper and remote function actuation. The modules will be produced at Continental's plant in Manila in the Philippines.

Continental Teves News 21.10.02

Dana Spain to Supply Opel Meriva

Dana Automocion has won a Euro 2.5m contract to supply door handles for the new Opel Meriva which goes into production at the Figueruelas plant from January 2003. Euro 120,000 is to be invested in Dana's Catalayud plant for tooling for the contract.

Autoindustria 11.10.02 INVESTMENTS

Dana to Supply Nissan in Brazil

Dana is to supply Nissan with main driveshafts and rear axles for the 2003 Frontier pick-up and Xterra SUV to be produced in Brazil for the Mercosur market.

Dana will supply driveshafts and maintenance-free universal joints for all 4x2 and 4x4 models for the life of the programme, with annual volume projected at 12,000 driveshafts. Dana will receive Nissan-designed and produced centre bearings, assemble them into driveshafts and then balance the shafts to an extremely tight specification. The centre bearing design allows for axial movement in the driveshaft without the need of a slip member. The rear axles will feature Dana's Trac Lok differential and will include improvements such as an enhanced sealing design, reinforced wheelend bearings to withstand severe road conditions, and 3-axis dry-cut hypoid ring and pinions for improved fuel efficiency and NVH.

Delphi News 8.10.02

Delphi Technologies on GM Cadillac XLR

The new GM Cadillac XLR, which goes on sale in spring 2003, will feature Delphi technologies designed to enhance performance, occupant safety and comfort and convenience.

The technologies include the MagneRide and TRAXXAR chassis systems, as part of Delphi's Unified Chassis Control approach. This results in better control and ride comfort in a wide variety of driving conditions, as well as overall performance consistent with the character of the 2-seater roadster. The XLR will also feature the FOREWARN collision warning systems Adaptive Cruise Control, HVAC and powertrain cooling, with Delphi having responsibility for integrating parts such as the air conditioning refrigerant lines, duct work and coolant lines. Delphi's Satellite Radio Receivers is also featured allowing reception of XM Satellite Radio.

Delphi News 30.10.02

Delphi to Supply Diesel Common Rail Systems to Ssangyong

Delphi has announced a multi-year \$383m agreement to supply its Multec 1600 diesel common rail system to Ssangyong for use on 2L and 2.3L engines in 2003.

The Multec 1600 DCR system has been designed to meet future stringent emissions requirements around the world

and to provide solutions to increasing demands for improvements in fuel economy.

Delphi News 29.10.02 CONTRACTS

Delphi Dynamic Body Control for Chrysler

Delphi is to supply Dynamic Body Control (DBC) technology to Chrysler for a future application.

Delphi's DBC family of products includes semi-active or active systems that help improve vehicle stability by controlling a vehicle's roll response when the vehicle is cornering. Both systems respond in real-time to actual or anticipated driving conditions. The active system may consist of one or two hydraulic actuator cylinders that interact with the anti-roll bars, a power source, a control manifold with integral valves and a pressure sensor, a controller and on-board vehicle sensors which monitor steering angle lateral acceleration and vehicle speed. The semi-active system may consist of one or two anti-roll bar latch/unlatch devices, a controller and appropriate vehicle sensors. Chrysler will use an active system, marking Delphi's first North American application for DBC.

Delphi News 21.10.02

Delphi Wins Renault Diesel Common Rail Contract

Delphi has won a contract with an estimated lifetime value of over \$2.5bn to supply advanced common rail diesel injection systems to Renault.

The second-generation diesel common rail systems will be available on the new Megane II, and also the Clio and Kangoo models fitted with the 1.5L dCi engine. The contract, takes the cooperation between Renault and Delphi up to 2008. The system has already allowed Renault to achieve compliance with the Euro 3 emissions standards and will permit compliance with Euro 4 when required. Delphi's customers for second-generation common rail technology include Ford, Hyundai-Kia and the Peugeot group. Delphi expects output to reach 2.5m systems a year by 2006. Dominique Chauvin, managing director of Delphi Energy & Chassis Systems Europe, expects diesel engines to account for over 45% of car sales in Europe by 2005, compared with around 39% at present.

Delphi News 14.10.02

New Common Rail Diesel Business for Delphi

Delphi is to supply the Peugeot group with its Multec DCR 1400 common rail diesel fuel system for a 1.4L engine for the Citroen C3.

Major systems for the contract will be produced at Delphi plants in Blois, La Rochelle and Barcelona. Delphi is also supplying a modular reservoir assembly for the BMW Z4 as part of its fuel handling system. It is also supplying body electronics.

Automotive News Europe p24 7.10.02

New Delphi Cam Phaser for Renault Megane Engines

Delphi is to supply an innovative, continuous cam phasing system for petrol engine versions of the new Renault Megane II.

Fitted to the new 1.6L K4M Plus engine, it is Renault's first cam phaser application and Delphi's first production vane-type cam phaser. The new system helps increase fuel economy by around 2% on NMVEG cycle. It also increases torque by 3-8% and peak power by up to 4%, as well as delivering improved drivability. It also allows the engine to meet Euro 4 requirements without EGR. This allows a reduction in idle speed of almost 150rpm. Hydraulic pressure provides an inlet camshaft authority of 22.5 degrees under the control of the engine ECU. The optimum cam angle is determined by a look-up table depending on engine load, engine speed and coolant temperature. The use of aluminium for key components, such as the stator and rotor, permit a weight reduction of 30-40% compared with comparable production systems. For the diesel versions of the Megane II using the 1.5L K9K engine, Delphi is to supply its second-generation common rail injection system.

Delphi News 1.10.02 ENVIRONMENT

Customers for Delphi Generation III Power Sliding Door

Citroen, Fiat, Lancia and Peugeot are the first European vehicle producers to offer volume vehicles fitted with an electric power sliding door. The Delphi door allows users to open and close the side-entry doors at the touch of a button.

The Delphi system provides remote, automatic operation of side-entry sliding doors, using vehicle-mounted switches of a remote-entry unit, so that people can open and close a door even with their hands full. The technology also solves the problem of large, heavy doors, which can be difficult to open or close manually if the vehicle is on an incline. With a lifetime contract value of Euro 28m, the Delphi door is standard on top-of-the-range models of the Peugeot 807, Citroen C8, Fiat Ulysse and Lancia Phedra. It is also offered as an option on other models. Generation III has a packaging reduced by 25% compared with earlier models.

Delphi News 30.9.02 CONTRACTS

Denso to Supply CO2 Air Conditioning to Mercedes-Benz

Denso and Mercedes-Benz are working together to develop a CO2 air conditioning system for a Mercedes-Benz model. No contract has been signed yet.

Denso's CO2 system is scheduled to make its debut on the Toyota FCHV fuel cell hybrid vehicle. Volume has not been revealed but is expected to be relatively low. Closed circuit CO2 air conditioning systems have no global

warming impact and, by drawing less power generated power CO2-producing vehicle engines than conventional systems, CO2-based air conditioners can halve CO2 emissions and they can cool interiors more quickly.

Automotive News Europe p12 7.10.02

Eaton to Supply Transmissions to Volvo Trucks in South America

Eaton is to supply Volvo Trucks with Volvo heavy-duty transmissions for the South American market.

Total sales under the eight-year agreement are estimated at \$112m. The transmissions will be produced at the Eaton plant in Valinhos, Sao Paulo, Brazil. Eaton will produce 100% of Volvo's requirement for the South American market. Deliveries are due to begin in October 2004. The 14-speed transmissions will replace similar units that are now being imported from Sweden, as well as a different model now being produced by a local company. The Valinhos plant has also won an eight-year contract to supply transmissions to AGCO for its Buccaneer four-wheel agricultural tractor.

Eaton News 11.10.02 CONTRACTS

Ficosa Supplies Mirrors for Bentley Continental

Fico Mirrors, has incorporated advanced technologies in the rear-view mirrors it has developed for the new Bentley Continental GT.

The mirrors include the Blink indicator system and a courtesy light. Blink improves safety, using LED technology for 180deg visibility and siting the lights at driver-eye level on the outermost part of the vehicle. The courtesy light lights the side of the vehicle from the mirror to the ground. It has a timer control independent of the interior and a xenon lamp. The mirrors have position memory and power adjustment is controlled from the interior. The mirrors are colour-keyed.

Autoindustria 18.10.02

Freudenberg-NOK Sealing Package for GM Engine

Freudenberg-NOK is supplying GM with a total sealing package for the next-generation Northstar engine for the 2004 Cadillac XLR roadster and SRX luxury utility vehicle.

This is the first time that GM Powertrain has sourced all of the seals for an engine from Freudenberg-NOK. The sealing package includes 22 part numbers and components being provided by five separate plants in the US.

Freudenberg-NOK News 8.10.02

Global Telematics Selects Numerex for Services

Numerex is to provide Global Telematics (GTI) of California with wireless communications products and services for the deployment of GTI's GeoTracer location tracking and reporting device.

GeoTracer makes it possible for individuals and commercial fleet managers to track and locate vehicles remotely at any time and from any location. It is built around Numerex's telemetry radios and operates using GPS satellite tracking technology via Numerex's Cellemetry network.

Global Telematics News 1.10.02

Hella Adaptive Forward Lighting for Opel Vectra and Signum

Opel is to offer Adaptive Forward Lighting (AFL) on the Vectra and new Signum models from 2003.

Opel is the first car producer to introduce the new technology, which was developed with Hella. AFL offers clear advantages in terms of active security and comfort. It combines bi-xenon lamps with a light that illuminates angles up to 90deg at junctions and in tight bends.

According to the latest study from the German federal statistics office, over 40% of fatal car accidents occur at night, despite there being 80% less traffic than during the day. Scientific studies have shown that visual perception, from which we obtain 90% of information relating to traffic, drops to 4% when visibility conditions are bad. A pre-condition for the introduction of the technology is an amendment to EU regulations to permit the use of asymmetrical swivelling headlamps, due to come into force at the beginning of 2003.

Autoindustria 30.10.02

iBiquity HD Radio Licensed for Delphi Receivers

Delphi has licensed iBiquity Digital's HD Radio technology and will integrate it into receivers due to become available to car producers in 2004.

HD Radio technology, iBiquity's In-Band On-Channel (IBOC) solution enhances AM and FM broadcasts with digital signals that improve listening quality and allow broadcasters and vehicle producers to provide value-added services such as producer provided information specific to the type of vehicle. In addition, broadcasters can offer consumers station information, song and artist identification, stock and new reports, local traffic and weather alerts etc.

iBiquity News 21.10.02

Johnson Controls' AutoVision for Renault Vel Satis

Johnson Controls is to supply its AutoVision rear-seat entertainment system to Renault, which will offer it as an option on the Vel Satis by the end of 2002.

AutoVision can be used to play both DVD films and audio CDs. In the Vel Satis the system is located in the centre console and features an electrically powered pop-up video screen. When not in use, the monitor disappears into the console and a lid protects it from potential theft. The screen is electronically adjustable to the passenger's viewing angle. There is an infrared remote control. AutoVision is also available on the Opel Zafira and Omega Caravan, integrated into the overhead console.

Johnson Controls News 21.10.02

Johnson Controls Entertainment Systems for Ford Models

Johnson Controls is starting production of its AutoVision DVD rear-seat entertainment system for the 2003 Ford Explorer, Lincoln Aviator and Mercury Mountaineer, marking a first for the industry in terms of providing built-in storage for DVDs.

AutoVision, developed jointly with Philips Components, is completely integrated into the vehicles' audio system. It is also the first time that a factory-fitted entertainment system is available in vehicles equipped with producer-installed moon roofs. AutoVision will also be available in vehicles without moon roofs. The centre overhead location with second-row access creates convenience and an integrated look and feel. Each vehicle with the system will be fitted with wireless headphones and a remote control unit, allowing rear-seat passengers to listen to DVD players via headphones, while the front-seat passengers listen to the radio or CD player. The driver can override the rear-seat control of the system via the radio head controls.

Johnson Controls News 30.10.02

GM Business for McLaren

McLaren Performance Technologies has won a significant powertrain manufacturing contract from GM, its largest single order ever.

McLaren is to machine and sub-assemble special, high-performance cylinder heads and engine blocks for production between 2005 and 2008. The contract is worth around \$16m in incremental sales over the four years. The programme could be extended to 2010 and also increase in annual volume. The first run of cylinder heads is now on-line at the McLaren Performance machining centre in Oldcastle, Ontario.

McLaren News 28.10.02 CONTRACTS

Metaldyne Products for Ford SUVs

Metaldyne has started supplying rear knuckles for the new 2003 Ford Expedition and Lincoln Navigator SUVs.

Metaldyne will supply a fully machined and tested ductile iron rear knuckle to Continental Teves, where it will be coupled with a Metaldyne wheel hub as part of a brake corner module for shipment to Ford. Metaldyne is also managing the validation testing of the components at its technical centre in Plymouth, Mich. The knuckles will be produced at Metaldyne's plant at Bluffton, Ind. The steel

wheel hubs will be supplied machined and assembled to The Timken Company, which will assemble the wheel hub and bearing unit and ship the assembly to Continental Teves. The hubs will also be produced at the Bluffton plant.

Metaldyne News 7.10.02

Millennium Cell Hydrogen on Demand System on H20

Millennium Cell's Hydrogen on Demand fuel system powers the Peugeot group's H20 fire truck, which has been presented at the Paris Motor Show.

Millennium Cell believes that its Hydrogen on Demand fuel system provides important range extending technology in a very compact package that no other hydrogen storage alternative can provide.

Millennium Cell News 2.10.02 ENVIRONMENT

Mitsubishi HI to Supply Air Conditioners to GM

Mitsubishi Heavy Industries is to supply air conditioners and engine cooling systems to GM for a new minivan to be introduced in 2004.

The deal, worth Y 70bn, covers 850,000 units of the new vehicles. GM plants to produce the minivan between 2004 and 2008. Mitsubishi HI has been supplying air conditioners and car components to GM since 1997.

Mitsubishi HI News 22.10.02 CONTRACTS

Toyota Selects Nuance for Japanese Telematics Service

Toyota has selected Nuance software to speech-enable its G-Book Japanese telematics services.

G-Book provides hands-free access to data, music and other information from in-car terminals, PCs and mobile devices via simple voice commands. The initial pilot service will be available in Japan in November 2002.

Toyota News 22.10.02

DAF Supplier Award for Reinz

Reinz has received DAF's Preferred Supplier award. The company develops and produces high-value sealing systems for all DAF product ranges and is the sole supplier of cylinder head gaskets and gaskets for exhaust systems.

Reinz is currently developing a new generation of cylinder head gaskets for DAF's MX engines. These will be based on MLS (Multi-Layer Steel) technology and are expected to be included in series production from 2005.

Reinz News Release 10.10.02

Reinz Sealing Technology for Maybach

Reinz is to supply all sealing and shielding components used in the Maybach's 12-cylinder 550hp engine.

The technology was developed to meet requirements for a long service life, low noise levels and smart power delivery for the engine, which has an extremely light design. Parts to be supplied include cylinder head gaskets, metallic secondary gaskets for exhaust manifolds, the blower flange, E-fuel injectors and suction pipe, as well as the complete multi-part shielding system for the exhaust manifolds with integrated gaskets, the turbocharger and the ignition module.

Reinz News Release 8.10.02

SiemensVDO Technology on new Audi A8

SiemensVDO is supplying innovative driver information displays, navigation and keyless access solutions, which are featured on the new Audi A8.

The brilliant, clear, near-3D driver information display is integrated into the instrument cluster. Flanked by the engine rev and speedometer gauges, the thin-film transistor (TFT) displays driver information on a 320 by 240 pixel field. The technology uses red, green and blue primary colours, each with its separate transistor, allowing significantly enhanced colour. It provides an artificial depth through flowing colour changes and moving shadows. The navigation system offers a full megabyte of image data and 35 different navigation scenarios with turn-off instructions composed from over 300 bitmaps. Several hundred pictograms and moving animations with different priority warnings can be superimposed on the display and remain permanently illuminated in the background. Around 300 text lines, covering all vehicle functions, are integrated into the system in seven languages.

The centre console multimedia human machine interface displays only pertinent information such as important on-board computer, navigation system, radio, phone and innovative autonomous cruise control data. The flexible instrument cluster circuit board uses an innovative production method for strong driver-oriented instrumentation. The backing material on the rear of the PCB is thinned to a precisely defined specification, allowing the board to be bent without risk of breaking. Angled forms within the instrument cluster can then be created without splitting the circuit board, enabling gauges and displays to be tilted toward the driver. The passive start and entry system uses the key fob as the passive user identification tag for authorisation of hands-free remote keyless entry.

SiemensVDO news 22.10.02

Ford to Offer Sirius Satellite Radio

Ford and Sirius Satellite Radio have reached a long-term agreement and Sirius satellite radio systems are to be offered on select Ford, Lincoln, Mercury, Jaguar, Volvo

and Land Rover models in 2003, and later on Mazda and Aston Martin models.

Separately, Sirius has announced the issuance to Ford of a warrant to purchase up to 4m shares of its common stock at an exercise price of \$3. This replaces a similar warrant with an exercise price of \$30.

Ford News 8.10.02

Solutia Automotive Products on Porsche Cayenne

Solutia Automotive is supplying its glass interlayer products to Porsche for the Cayenne.

The vehicle features almost the full range of interlayers for glass that Solutia offers. Solutia is supplying the Saflex interlayer for the windscreen and the Vanceva Color for the side Enhanced Protective Glass. The rear window sandwiches a layer of Solutia interlayer and a 3M film to reflect infrared radiation away from the vehicle. The composite interlayer can reduce heat build-up in a vehicle by 15-20deg C. Other benefits include sound reduction, protection of passengers and interior materials from UV ray penetration and weight reduction. Vanceva Color also adds a design dimension.

Solutia News 8.10.02

GM Business for Superior Industries

Superior Industries International has won new and replacement aluminium wheel supply business from GM for several 2003 vehicles.

Superior is to supply aluminium wheels for the Hummer H2. Painted and chrome wheels for the Buick LeSabre and chrome wheels for the Cadillac Escalade. Replacement contracts include redesigned wheels for the Chevrolet Silverado, GMC Sierra and Cadillac Deville.

Superior Industries News 22.10.02

TRW Leads Electrically Assisted Steering Market

TRW Automotive has confirmed its leading position in the global electrically assisted steering (EAS) market, announcing two new contracts which bring its global EAS contract gains for the next five years to \$4.5bn.

TRW has received a further order, valued at around \$150m, from a leading European vehicle producer for its column drive EPS starting production in 2002. The technology is already used on three new European models, including the Fiat Stilo. The other contract is for electrically powered hydraulic steering (EPHS) systems for a global vehicle producer. The contract is worth over \$180m a year in North America and Europe starting production in 2004. Previous TRW EPHS contracts include the VW Passat and Polo, and the Opel Vectra, Zafira and Astra.

Demand for electric steering technology is expected to continue to grow strongly, rising eventually to an estimated one in every two cars produced by 2010. TRW

is also looking to the future in terms of steer-by-wire and four-wheel steering systems and integration of chassis control. The company has a development contract for steer-by-wire with a major European vehicle producer and is establishing the optimum method of removing the mechanical connection between the steering wheel and the road wheels. TRW is also developing rear wheel steering systems to deliver 4WS for SUVs and other larger vehicles in order to reduce the turning circle and improve stability for vehicles carrying loads or for emergency manoeuvres.

TRW Automotive News 21.10.02 CONTRACTS

Valence to Participate in USABC Assessment Programme

Valence Technology is to participate in the US Advanced Battery Consortium's (USABC) technology assessment programme.

Valence's Saphion technology has been evaluated by Ford, DaimlerChrysler and GM, the members of the consortium. Saphion offers a combination of lithium-ion performance, and cost and safety characteristics that make it an attractive development platform for the automotive industry. Valence is a leader in the development of Saphion technology and lithium-ion polymer rechargeable batteries.

Valence Technology News 11.10.02

Valeo Motorised Boot Closure for Maybach

DaimlerChrysler has selected Valeo's motorised boot closure system for the Maybach. The system was seen first on the E-Class.

The system is operated using a remote control or via buttons on the boot and driver door. It has speed control and position functions, enabling vehicle producers to adjust operation according to requirements. The Maybach system is made up of an electro-mechanical drive unit and an electronic control unit. The ECU controls four main functions: opening and closure, speed, position and obstacle detection. The electronic components were developed at Valeo's Creteil unit, while the mechanical components were developed at the German R&D centre in Erdweg.

Valeo News 11.10.02

Visteon to Supply Entertainment Systems to VW

Visteon is to supply its Rear Seat Video entertainment system to VW for the Sharan and Multivan.

The systems has two 18cm high-resolution screens mounted on the front-seat headrests. The system for the Sharan will have a VCR and that for the Multivan a choice of VCR or DVD player. The systems have remote control and also have connections for standard games consoles and other multimedia devices. The new systems will be

produced at the Visteon plants in Verpilliere, France, and Cadiz, Spain, and sent to the VW Palmela plant in Portugal and the Hanover plant in Germany.

Autoactu 22.10.02

PLANT AND INVESTMENTS

ArvinMeritor to Shift Production from France to Hungary

ArvinMeritor is planning to transfer four lines for the production of electrical actuators for car locks from its Saint Die plant in France to a plant in Hungary.

The actuators are supplied to VW. The switch will entail the loss of 200 jobs and management says that it is needed in order to cut production costs. Management has assured unions that a new Ford contract will go to the plant, but has not said when. ArvinMeritor employs a workforce of 1,100 at Saint Die.

L'Usine Nouvelle 16.10.02 FR

New Plant in Korea for Autoliv

Autoliv Mando has opened a \$9m plant in Sanchuck, Korea, to produce airbags and seatbelts. A second construction phase will start in 2005.

So far in 2002, Autoliv's Korean subsidiary has seen a rise of 30% in sales and in two years sales are expected to rise to \$150m from \$40m, partly as a result of the transfer of production to Korea from other Autoliv companies. Autoliv Mando currently supplies airbag modules to Hyundai, but the new plant will enable it to also supply Kia, Ssangyong and GM-Daewoo. The product programme will be extended to include other products, such as seatbelts and electronic components.

Autoliv Press Release 3.10.02 CAPACITY; INVESTMENTS

BorgWarner Opens New Powertrain Technical Centre

BorgWarner has opened its new Powertrain Technical Center in Auburn Hills, Michigan.

The centre serves as the global headquarters for three of the group's business groups: BorgWarner Air/Fluid Systems, BorgWarner TorqTransfer Systems and BorgWarner Transmission Systems.

BorgWarner News 15.10.02

New Plant for Brose in Slovakia

Brose has opened its first production and assembly plant in Slovakia in Bratislava.

Some 125 people are employed at the plant, where door systems for the Porsche Cayenne and VW Touareg are produced. Brose has invested about Euro 7m in the plant. The plant will produce the door frame, waist rail, window regulator, door control unit, wiring harness, loudspeaker,

latch, glass and door seal - all mounted on an aluminium carrier. The plant has the capacity to produce 2,000 module variants. From 2003, an annual production rate of 130,000 vehicles is planned for VW Slovakia, with Brose supplying 520 door systems.

Brose News 28.10.02 CAPACITY

Lay-Offs at Caterpillar Engine Plants

Caterpillar is to lay off up to 3,270 workers at its truck engine plants in Illinois and Georgia, because of slowing demand.

The lay-offs will affect the plants at Mossville, Pontiac and Mapleton in Illinois, and the Jefferson and Thomasville plants in Georgia. Demand for heavy trucks is declining as a result of the introduction of stricter US engine pollution rules. Buyers stocked up with vehicles with engines that met the previous rules because of concerns over the cost and reliability of new engines.

Caterpillar News 15.10.02 PRODUCTION

Continental Increases Production in Eastern Europe

In 2002, Continental expects to almost reach its target of transferring 50% of car tyre output to low-cost locations, and the proportion is to increase further.

According to Manfred Wennemer, head of Continental, a rise to 60%, 70% or more could be envisaged. In addition to the expansion of plants in Timisoara, Romania, and Otrokovice, Czech Republic, Continental is planning to build a plant in an even less expensive location. This could have repercussions for the Aachen, Korbach and Hanover plants in Germany and the Clairoux and Sarreguemines plants in France, which must now implement further cost cuts. Continental has not ruled out eliminating capacity at these sites if the market does not develop as expected. At present, Continental is assuming that it will grow at a rate of around 5%. The company expects the European and US markets to grow by 2-3% a year, while Continental will show greater growth and increase market share.

Financial Times Deutschland 16.10.02 CAPACITY

Cummins to Consolidate Engine Assembly and Test Operations

Cummins is to consolidate its heavy-duty diesel engine assembly and test operations at its Jamestown, New York, engine plant.

Around 200 jobs will be lost and the transition will be completed by the first quarter of 2003. Cummins will continue to manufacture cylinder heads and engine blocks at the Columbus engine plant. The Jamestown plant has the flexibility and capacity to meet all customer requirements for the Cummins 11L and 1215L engines more productively and cost-effectively than any other alternative.

Cummins News 9.10.02

Dana Breaks Ground for New Technology Centre

Dana has broken ground for its new Automotive Systems Group Technology Center in Monclova Township, southwest of Toledo, Ohio.

The facility, to be completed in November 2003, will further integrate several of Dana's most important product lines. It will house significant engineering, IT, administrative, and sales and marketing functions for the light axle, driveshaft and systems integration operations.

Dana News 9.10.02 CAPACITY

Denso Plans More Plants in Europe

Denso is to open a plant in Turkey to meeting growing demand in Europe and is planning more new plants in Europe and China.

Denso is also seeing growing demand in North America, but has enough plants there. Much of the growth in Europe is expected to be for Denso's air conditioning and common rail diesel injection systems. CO2-based air conditioning systems are also seen as having growth potential. The new plant near Istanbul will produce air conditioning systems and engine cooling components. Production is due to start by the end of 2004, but could be brought forward. In China, Denso could open up to four plants in 2003 and 2004. It already has six joint venture manufacturing plants, which need to be restructured to upgrade manufacturing systems. Denso has new business with GM, which includes air conditioning systems for the Cadillac CTS and SRX. It also expects to win business with Ford.

Automotive News Europe p8 7.10.02 CAPACITY

Eaton to Move Parts Plant to Mexico

Eaton is moving its Mooresville, North Carolina, transmission hose and power steering parts plant to Queretaro, Mexico, because of the lower costs of production in Mexico.

The Mooresville plant will close in the first quarter of 2003. Eaton already has six plants in Mexico manufacturing automotive parts for the US market.

Eaton News 1.10.02 CAPACITY

Federal-Mogul Opens New Friction Products Technical Centre

Federal-Mogul has officially opened a state-of-the-art technical centre in Plymouth Township, Michigan, which carries out research, development and testing of advanced automotive brake pads and linings.

The centre becomes Federal-Mogul's North America centre of excellence for analysing brake noise, vibration and harshness, which is one of the main sources of vehicle warranty issues for vehicle producers. The company produces around 180m brake pads and related components a year.

Federal-Mogul News 17.10.02

Federal-Mogul to End Champion Spark Plug Production in Belgium

Federal-Mogul is to end production of spark plugs at its Champion subsidiary at Aubange, Belgium.

125 out of a total of 500 jobs will be lost and production will be transferred to the Upton plant in the UK. Aubange also produces windscreen wipers.

L'Echo de la Bourse 10.10.02 PRODUCTION

World R&D Centre for Ficosa

Ficosa has started work on converting its plant at Mollet del Valles (Barcelona) in Spain into a world research and development centre for all the group's divisions.

Autoindustria 16.10.02

First Technology to Halt Production at UK Plant

In spring 2003, First Technology is to stop production of fuel cut-off devices at its Farnborough plant in the UK. Production will continue in the US and the Dominican Republic.

The UK plant accounted for 14% of sales in 2001. It will remain a base for research and development and logistical support. The move will entail the loss of around 55 jobs and will cost around £1.5m, which will appear as an exceptional item in the 2002 accounts. First Technology is faced with a series of problems including the difficulties at US car producers, which have spent less with suppliers because of falling margins. First Technology is also to reorganise its automotive and special products division in Paris, with the loss of 19 jobs.

Financial Times p26 11.10.02 CAPACITY

Closed-Loop Aluminium Recycling Programme for Ford and Alcan

Ford and Alcan have launched the first closed-loop recycling programme for aluminium sheet scrap in North America.

Under the programme, Ford recovers aluminium process scrap from its Chicago stamping plant and returns it to Alcan for recycling directly back into vehicle body sheet. Previously, the recovered aluminium was sold on the general scrap market in combination with other metals, making it unsuitable for re-use in bodies. The scrap is generated during the stamping of aluminium bonnets for the Explorer, F-150 and Ranger pick-ups and the Lincoln Town Car. The plant stamps almost 1.3m bonnets a year, generating around 13m lb of process scrap.

Ford News 17.10.02 ENVIRONMENT

Hyundai Mobis to Build Plants in US and China

According to the Korea Economic Daily, Hyundai Mobis is planning to build plants in the US and China.

Hyundai Mobis is planning to invest Won 100bn to build plants in Montgomery, Alabama, and Shanghai. It will also go ahead with plans to build plants in India and Turkey.

Hyundai Mobis 22.10.02 CAPACITY; INVESTMENTS

Johnson Electric Starts Cooling Fan Production in North America

Johnson Electric is to start North American production of automotive cooling fan modules (CFMs) in November 2002 at its recently renovated plant in Brownsville, Texas.

Johnson Electric already produces CFMs in Italy, France, UK, Spain, Brazil and China, with units marketed under the Johnson Gate brand. It leads the market in Europe, China and South America. Johnson Electric sees CFMs as a growth market for it in North America. Initially, several models will be produced at the Brownsville plant, which will have capacity for 1m units a year. Electric motors for the CFMs will be sourced from Johnson Electric in Hong Kong.

Johnson Electric News 17.10.02 CAPACITY

Koito Opens Plant in Czech Republic

Koito has officially opened a Euro 30m plant at Zatec in the Czech Republic, which was built to be the sole supplier of headlamps for the local joint Peugeot group/Toyota factory.

The Peugeot/Toyota plant will produce small cars from 2005 and will have an annual capacity of 300,000 units, with the French marque accounting for 200,000.

Autoindustria 14.10.02 CAPACITY; INVESTMENTS

Two Magna Donnelly Plants to Close

Magna Donnelly is to close two area mirror production plants by March 2003 and reduce the combined workforce of the unit by one third.

The plants are at Cascade Township and Kentwood. The workers concerned are being offered jobs at plants in Grand Haven and Kent County's Bowne Township. The cuts and closures are the first changes announced since the formation of Magna Donnelly on 1 October 2002.

Magna News 17.10.02 CAPACITY

Ronal Builds Second Plant in Czech Republic

Ronal is to invest Euro 46m in a plant in Pardubice in the Czech Republic to produce cast alloy wheels.

Ronal has had a wheel plant in the Czech Republic since 1994. It has annual sales of Euro 115m and its customers

include Audi, BMW, Ford, Mercedes-Benz, Nissan, Opel, Saab, Skoda, Toyota and VW.

Autoindustria 16.10.02 CAPACITY; INVESTMENTS

New Plant in Mexico for Sachs Boge

Sachs Boge has opened a third plant in Mexico in El Salto. This unit will double the company's shock absorber output by 50% to 14m units in 2003.

Overall investment totals \$70m in the project which marks the start of the second phase of the company's strategy to become market leader in the US, Canadian and Mexican markets. The unit will produce prototypes for customers such as Ford and DaimlerChrysler.

Autoindustria 23.10.02 CAPACITY; INVESTMENTS

Siemens to Buy Chrysler Parts Plant?

According to sources close to the situation, Siemens is considering buying a Chrysler parts plant in the US.

Chrysler is shedding components plants in order to raise cash and focus on its automotive business. One of the plants for sale is an electronics plant in Huntsville, Alabama. SiemensVDO Automotive is looking at buying quality assets and selling off less profitable areas in order to offset a decline in global demand for cars.

Chrysler News 25.10.02 M&A

New Plant in Hungary for Stanley Electric

Stanley Electric of Japan has opened a new plant at Gyongyos in Hungary, which will produce headlamps for the European market.

Euro 9.6m has been invested in the plant, which has started pilot production. In December 2002 output of 4,500 headlamps a month will start for Mazda cars produced in Europe. From 2003, output of 5,000 units a month will be added for supply to Suzuki models produced in Europe.

Autoindustria 10.10.02 CAPACITY; INVESTMENTS; PRODUCTION

New Plant for Texaco Ovonic Battery Systems

Texaco Ovonic Battery Systems, a 50:50 joint venture between a unit of ChevronTexaco and a subsidiary of Energy Conversion Devices, is building a new battery plant in Springboro, Ohio.

The new facility is expected to double production capacity for the venture's advanced nickel metal hydride (NiMH) batteries. The products will be sold to the transportation and stationary markets. The NiMH batteries provide more than twice the energy and life cycle of conventional lead acid batteries, are maintenance free and are environmentally benign. They are the enabling technology for electric and hybrid electric vehicles to meet

the requirements for next-generation fuel-efficient vehicle applications.

Texaco Ovonic News 29.10.02 CAPACITY

ThyssenKrupp Presta Invests in Plant in France

ThyssenKrupp Presta France is to invest Euro 49m in its Florange plant between now and 2005. 250 jobs will be created, taking the total to 560.

Of the total Euro 40m is to be spent on automated assembly line and Euro 9m on addition buildings. Work is scheduled to be completed in summer 2003. Output of steering columns will rise from 18,000 units a day at present to 30,000 in 2005. At that point, the plant will also be assembling steering columns for Audi/VW, Renault, MCC Smart and Fiat, and also for the Ford Focus, Mazda 323 and Volvo V40, which share a platform.

Autoactu 14.10.02 INVESTMENTS; PRODUCTION

Timken Expands Precision Components Business to Latin America

The Timken Company is to start production of precision components for automotive drivetrain applications at its bearings plant in Sao Paulo, Brazil, within a year.

The expansion, together with the company's recent European acquisition, capitalises on Timken's core competencies to deliver solutions to meet customer needs globally.

Timken News 18.10.02 PRODUCTION

Topre to Set Up Unit in US

Topre, a Japanese producer of pressed parts, is to set up a wholly owned unit in the US in 2004 to make parts for Japanese transplants in the southern US.

Topre America will be based in Cullman, Alabama. Initially, its customers will be the Japanese companies Topre supplies in Japan. Topre plans to start receiving orders from local and European car producers as its plant ramps up production. Operations are due to start in August 2004 and sales are expected to reach \$54m in 2006.

Topre News 16.10.02 CAPACITY

TRW to Close Plant in France

TRW is to close its TRW Occupant Restraint Systems France plant at Ecoouflant near Angers in the first quarter of 2003.

The plant employs a workforce of 153. It assembles seatbelt buckles and belts with torsion bars for cars. For several years, TRW has been seeking in vain ways to ensure the long-term future of the plant, including the acquisition of the site by a sub-contractor partner. In 2000,

the operation made a net loss of Euro 2.9m on turnover of Euro 52.1m.

L'Usine Nouvelle 8.10.02 CAPACITY

Viza Approves New Plant in Czech Republic

Viza Automocion of Spain has approved the setting up of a new Euro 9.6m plant in the Czech Republic to produce car seat frames.

The plant will have welding, painting and assembly areas. It is scheduled to start operations at the end of 2003, when a new vehicle goes into production in northern France for which Viza is to supply Euro 30m worth of seat frames a year.

Autoindustria 11.10.02 CAPACITY; INVESTMENTS

ALLIANCES

Acunia to Participate in Third Generation Telematics Project

Acunia is to play a key role in Europe's Third Generation Telematics (3GT) project, which runs from June 2002 to November 2003.

The project, supported by the EC Information Society Directorate General, will be developed through a series of workshops and on-site development programmes at OEMs in Europe. Deliveries will include a set of standard specifications for the European telematics mass market. Acunia will provide its telematics expertise and deploy its OTF middleware-management software at all five automotive OEM test sites in Europe. Key issues that need to be resolved for telematics services to be delivered in a cost-efficient way include interoperability at vehicle level, local service life cycle management level and operator level. 3GT will define common interfaces for OSGi-based telematics service delivery. The key objectives are to develop OSGi-based specifications, test and validate them and propose that the specifications be considered as an open standard by the relevant standardisation bodies.

Acunia News 9.10.02

Arcelor Ends Merger Talks with Bethlehem Steel

Arcelor, the world's largest steel group, has called off merger talks with Bethlehem Steel, the US' third largest producer.

According to Guy Dolle, head of Arcelor, the Bethlehem's pensions burden constitutes too great a risk. Bethlehem has a workforce of 13,000, but has pension liabilities towards 130,000 people. The US company has filed for protection from its creditors.

FT Deutschland 7.10.02 M&A

ArvinMeritor to Bid for TRW Unit?

ArvinMeritor and Apollo Management, a private equity company, are considering teaming up to bid over \$4.5bn for TRW's automotive operations, according to sources familiar with the situation.

The alliance could force buy-out firms Blackstone and Carlyle to raise their \$4.5bn joint bid for the unit. The firms recently reduced their tentative offer by 10% because of the continuing slump in the automotive components industry and other factors. A deal could be announced by the end of October 2002, but it could be delayed by a bidding war.

TRW News 18.10.02 M&A

Bekaert and Nuvera Cooperate to Improve Fuel Cell Stacks

Bekaert and Nuvera Fuel Cells are to develop new components to improve the functionality of PEM (proton exchange membrane) fuel cells.

The partners will develop applications using metal fibre media produced by Bekaert Fibre Technologies, which will be integrated with Nuvera's proprietary technology, resulting in a lower-cost fuel cell stack with enhanced performance and improved durability.

Bekaert/Nuvera News 3.10.02 ENVIRONMENT; JV

Volvo Cars Sells Chassis Unit to Benteler

Volvo Cars is to sell its CCG chassis unit to Benteler Automobiltechnik of Germany, with the deal taking effect on 1 January 2003.

For Volvo Cars, CCG does not form part of its core operations, and the sale will free up capital and reduce future investments.

L'Echo de la Bourse 22.10.02 M&A

Benteler Acquires Opel Spain's Chassis Module Business

Benteler has notified the Spanish competition authorities that it has acquired the car chassis module production business of Opel Espana.

Benteler has three plants in Spain, in Valencia, Burgos and Martorell. It also has a sales office in Barcelona.

Autoindustria 14.10.02 M&A

Bosch and Michelin Vehicle Dynamics Management Systems

Bosch and Michelin have set up a joint venture for integrated vehicle dynamics management systems.

Integrated Safety Systems ISS is based in Paris. The aim of the venture is the market introduction of new systems from the partners' joint development activities. In 2001, the companies announced that they were to cooperate on

tyres and chassis control systems, with the aim of improving vehicle safety and mobility.

Bosch/Michelin News 30.9.02 JV

Joint Venture in Korea for Brose

Brose has set up a joint venture in Korea with Kwang Jin Sang Gong to produce door systems.

In September 2002, Brose and Kwang Jin Sang Gong of Korea set up a 60:40 joint venture to strengthen their position in the Asian market. The new venture, Brose-Kwang Jin Automotive Systems, is based in Ansan near Seoul and is responsible for the production and sale of automotive door systems. The company is forecasting future sales of Euro 60m in Korea and around Euro 40m in the US. It has already received the first door system order from Hyundai. Kwang Jin is a market leader in Korea for window regulators with a 75% share.

Brose News 28.10.02 JV

Faurecia Venture to Produce Seats in China

Faurecia has formed a joint venture with GSK of Taiwan to produce seats at Wuhan in China.

The new venture, FGW (Faurecia GSK Wuhan Automotive Seating), owned 51% by Faurecia and 49% by GSK, will supply complete seats to Dongfeng-Citroen Automobile for the Citroen Xsara and Picasso from December 2002. The plant will reach full capacity in 2004. It will then generate turnover of Euro 30m. GSK has 16 plants in China and also has units in the US, Thailand and South Africa. Its worldwide automotive turnover totals Euro 500m.

Les Echos 7.10.02 JV

Freudenberg-NOK Acquires High Quality Plastics

Freudenberg-NOK has acquired High Quality Plastics (HQP), a specialist designer and producer of PTFE seals used in automotive transmissions and industrial products, from Koehler Brothers.

HQP produces over 0.250bn parts a year and offers special expertise in the design and production of thermoplastic rotating ring seals, precision plastic components and subassemblies. In 2001, sales totalled \$13.1m. The acquisition consolidates Freudenberg-NOK's position as the leading supplier of automotive PTFE seals.

Freudenberg-NOK News 9.10.02 M&A; RESULTS

Hitachi COMET Telematics Partnership Programme

Hitachi Semiconductor (America) has formed the Community Enabling Telematics (COMET) partnership programme, which allows Hitachi and member companies to make comprehensive and vertically integrated, one-box system development solutions available to system

engineers designing telematics and car infotainment systems products.

Members include IBM, Clarity, Extended Systems, Fonix and SiRF Technology. They provide key enabling software and middleware technology, such as RTOS. Speech recognition algorithms, acoustic echo cancellation and noise suppression software, Bluetooth application stacks, GPS software, chipsets etc. COMET partners get early access to Hitachi's technology and product roadmap and can participate in future automotive-focused marketing activities. The COMET programme may be expanded in future.

Hitachi News 21.10.02 JV

EU Approves Johnson Controls Purchase of VB Autobatterie

The European Commission has approved Johnson Controls' acquisition of Varta's 80% stake in VB Autobatterie for Euro 312.5m.

According to the Commission, the venture will not significantly reduce competition, including in Germany. The acquisition enables Johnson Controls to expand into Europe. It is already the largest automotive battery supplier in North and Latin America. Varta's automotive battery business, comprising Varta Automotive and its 80% stake in VB Autobatterie, supplies all European car producers. In 2001, it had sales of around Euro 590m. Bosch will retain its 20% stake in VB Autobatterie.

Johnson Controls News 18.10.02 JV; M&A

Magna Completes Acquisition of Donnelly

Magna has completed the acquisition of Donnelly. The merger advances Magna's position to a global leader in mirrors.

Magna's mirrors business now has an extended product line, a more diversified customer base and an enhanced technology platform based on advanced electronics.

Magna News 1.10.02 M&A

Methode to Acquire Kill & Bolton

Methode Electronics is to acquire the business assets of its exclusive sale representative, Kill & Bolton Associates International.

Methode of KBA have collaborated for 28 years, with KBA being mainly responsible for providing customer development and on-going sales and marketing for Methode's domestic and foreign automotive business. It has around 50 employees in the US, Europe and Asia. The deal is expected to close on 31 January 2003.

Methode Electronics News 10.10.02 M&A

MTM to Merge with Impco

MTM of Italy, a major global supplier of alternative gaseous fuel products and systems, is to merge with Impco in January 2003.

MTM has annual sales of \$40m. The merger will enable MTM and Impco to accelerate their market penetration and leading position in key areas throughout the world and will add complementary market, product diversification and technical knowledge. MTM owns the BRC Gas Equipment brand and a privately held company in Cherasco. The worldwide alternative fuels market is forecast to grow at an average annual rate of over 25% up to 2010 to reach over \$4bn a year.

MTM/Impco News 10.10.02 ENVIRONMENT; M&A

Pechiney to Acquire Corus Aluminium Operations

Pechiney has reached agreement with Corus on the proposed acquisition of its aluminium conversion operations in a deal worth around Euro 750m.

In 2001, the operations had net sales of Euro 1,549m and employed a workforce of just over 4,600. The deal covers plants in Koblenz, Bonn, Bitterfeld and Vogt in Germany, Duffel in Belgium and 60% of Cap de la Madeline in Canada and Tianjin in China. The acquisition gives Pechiney a unique opportunity to develop in the aluminium conversion business, especially in its two key markets - aerospace and automotive. Synergies, particularly from the industrial optimisation of production programmes between plants serving the same markets, are estimated at around Euro 40m in three years and are expected to rise to over Euro 60m by 2007.

Pechiney News Release 23.10.02 M&A

QNX and Johnson Controls Collaborate on Telematics

QNX Software Systems and Johnson Controls are to collaborate on the development of innovative and future-ready products for in-vehicle telematics and multimedia systems

The companies are collaborating on Johnson Controls' BlueConnect hands-free system, with QNX providing the core operating system. The QNX Neutrino RTOS provides a fault-tolerant, dynamically upgradeable platform that gives Johnson Controls a rich environment in which to build reliable telematics systems and next-generation products.

QNX/Johnson Controls News 21.10.02 JV

SmarTire Agreement with Pirelli

SmarTire Systems and Pirelli have signed a supply agreement on tyre monitoring systems that measure the pressure and temperature of car, truck and motorcycle tyres.

Produced by SmarTire and tested and certified by Pirelli, the products will be marketed and sold under the X-Pressure name. They will go on sale by the end of 2002, through Pirelli channels in Italy, Germany, the UK, Spain and Switzerland.

SmarTire News 17.10.02 JV

Joint Venture for LDV and Stadco

LDV has set up a joint venture with Stadco Holdings, Stadco Birmingham Pressings, which will use the pressing operations at LDV's plant at Washwood Heath in the UK West Midlands.

The venture forms part of LDV plans to find new business and maximise its asset base following the collapse of plans to produce vans with Daewoo. Stadco supplies stampings and assemblies to Jaguar, Land Rover, MG Rover, Peugeot, BMW and VW. It has plants in Shrewsbury, Tipton, Powys and Halewood. The new company will start before the end of 2002 and LDV will put its own vehicle pressings into the new business. LDV's pressing operation serves LDV internally and also Land Rover. It produces 7m parts a year, of which 1.7m go to Land Rover.

The Birmingham Post p17 8.10.02 JV

STMicroelectronics to Buy Motorola Chip Operations?

STMicroelectronics is in talks on the acquisition of Motorola's semiconductor operations. This would create the world's second largest chip producer after Intel with sales of over \$11bn.

ST has denied that it has held merger talks with Motorola and Motorola has declined to comment. Senior French and Italian officials have said that a deal is being discussed and one has said that there could be a deal in 2003, backed by the French and Italian Governments, which own around 36% of the company.

Financial Times p1 16.10.02 M&A

ThyssenKrupp to Acquire Galmed

ThyssenKrupp has made an offer for the 75.5% stake held by Arcelor in Galmed of Spain. ThyssenKrupp already holds the other 24.5%.

Galmed produces coated flat steel, mainly for car producers. It forms part of the assets that Arcelor must sell in order to comply with EU conditions for its formation from the merger of Usinor, Arbed and Aeralia.

Tribune 9.10.02 M&A

Timken to Acquire Torrington

The Timken Company is to acquire Torrington from Ingersoll-Rand for cash and stock valued at around \$840m.

The acquisition will make Timken the world's third largest bearings company with annual revenues of around \$3.6bn,

global leadership in the needle and tapered roller bearing and alloy steel sectors, and operations on six continents. It broadens its portfolio of automotive and industrial bearings-based products and service solutions. Timken expects to make annual cost savings of about \$80m to be fully phased in by the end of 2005. Torrington's needle bearing solutions for automotive powertrain applications provide a strong complement to Timken's leading tapered roller bearings and precision steel component solutions for wheel ends and drivelines.

Timken News 16.10.02 M&A

EU Approves TRW Takeover

The European Commission has approved the takeover of TRW by Northrop Grumman, saying the tie-up would not damage competition in the EU or cause prices to rise.

TRW is in talks with two financial buy-out firms to sell its automotive parts operation for around \$5bn.

TRW News 16.10.02 M&A

Appointments at Valeo Raytheon

Roland Lartigue has been appointed chief executive officer of the new Valeo Raytheon Systems joint venture.

Helmut Wodrich has been appointed chief operating officer. The venture was set up to develop and market new automotive systems based on advanced sensing technologies, primarily radar related. The aim is to develop technologies to provide a complete, 360deg protective warning cocoon around the vehicle. The company will also act as systems integrator of advanced sensing technologies. It will draw on Raytheon's aerospace technologies and Valeo's automotive technologies. The company will significantly raise the standard for driver visibility by applying advanced aerospace detection and tracking concepts with Valeo's Seeing and Being Seen initiatives in obstacle detection devices. Possible additional product applications include: pre-collision sensing to prepare the vehicle and its occupants for a pending crash; hazard detection after dark, in dim light or in dense fog or smoke; support for adaptive cruise control systems; stop and go traffic control assistance; and object detection for park assist.

Valeo Raytheon News 23.10.02

KEY FIGURES

Third-Quarter 2002 Fall in Profit for Akzo Nobel

In the third quarter of 2002, Akzo Nobel made a net profit of Euro 232m, a fall of 3% on the same period in 2001.

Akzo Nobel News 23.10.02 RESULTS

January-September 2002 Results for Alcan

In the first nine months of 2002, Alcan saw sales and operating revenues fall to \$9,360m from \$9,589m. Net income (including non-recurring items and foreign currency balance sheet translation) fell to \$348m from \$358m.

In the third quarter of 2002, revenues rose to \$3,224m from \$3,157m, and net income to \$191m from \$149m. Ebitda for Rolled Products Americas and Asia rose by 12% to \$86m, while Ebitda for Rolled Products Europe rose to \$37m from \$9m. Ebitda for Engineered Products fell by \$6m to \$23m.

Alcan News 16.10.02 RESULTS

Third-Quarter 2002 Results for Alcoa

In the third quarter of 2002, Alcoa made a net profit of \$193m, compared with \$232m in the same period in 2001.

Earnings excluding a special after-tax charge of \$23m relating mainly to the curtailment of production in the primary smelting operations, totalled \$216m. In the short term, the restructuring operations and deployment of the Alcoa Business System are helping to lessen the impact of continuing weak economic conditions. At the end of the third quarter, Alcoa had achieved \$560m in annualised cost savings and expects to meet its \$1bn target in 2003.

Alcoa News 4.10.02 RESULTS

2001/02 Rise in Sales for Amcast

In its 2001/02 business year (which ended on 31 August 2002), Amcast increased net sales to \$576.2m from \$529.4m in the previous year. Net loss fell to \$21.1m from \$37.1m.

In the fourth quarter, sales rose to \$152.6m from \$132.3m as a result of strong automotive demand in North America and Europe. North American automotive sales rose by 30%, while the European Speedline operation saw a rise of almost 18%. Automotive product quality improved and the Wapakoneta plant in Ohio made an annual operating profit for the first time. One of the most important initiatives is the implementation of the Amcast Production System, which has resulted in significant productivity improvement. In the North American wheel business, there has been a 25% increase in revenue and plants have more than doubled their operating income.

Amcast News 16.10.02 RESULTS

Third-Quarter 2002 Rise in Sales for American Axle

In the third-quarter of 2002, American Axle & Manufacturing increased sales for the third consecutive quarter to a record \$829m from \$744m in the same period in 2001.

Growth came from increased production at GM and the successful launch of the Dodge Ram programme and the Hummer H2 driveline system. Sales to GM rose by 4.3%,

while sales to non-GM customers rose by 63%. Operating income rose to \$68.7m from \$54.1m. In the first nine months of 2002, operating income rose to \$228.2m from \$178.4m. Sales rose to \$2.569bn from \$2.316bn.

American Axle News 23.10.02 RESULTS

2001/02 Fall in Sales for Atchison Casting

In its 2001/02 business year (which ended on 30 June 2002), Atchison Casting saw net sales fall to \$388.2m from \$428.2m in the previous year.

The company made a net loss of \$28.1m, compared with a net loss of \$37m. Sales in the automotive and trucking operations rose to \$48.8m from \$40.9m. The liquidation of Atchison's Fonderie d'Autun operation in France has started. Atchison is taking measures to improve operating results, including the downsizing of the La Grange Foundry and further cost cutting to improve control of the manufacturing process,

Atchison Casting News 17.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Autoliv

In the third quarter of 2002, Autoliv made a pre-tax profit of \$66m, compared with \$38m in the same period in 2001.

Sales rose by 17% to \$1.07bn, mainly as a result of organic growth and the effects of the acquisition of Visteon Restraint Electronics in the US in February 2002. Growth was strong in all countries in Asia, and sales in Japan rose by over 20%, led by inflatable curtain fitment in Nissan models and the Toyota Camry, and chest side airbag sales.

Autoliv News 17.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Avery Dennison

In the third quarter of 2002, Avery Dennison made a net profit of \$63.1m, compared with \$61.7m in the same period in 2001.

Sales rose by 15.3% to \$1.1bn. In the first nine months of 2002, net profit rose to \$201.7m from \$185.1m and sales to \$3.1bn from \$2.9bn. In the third quarter, the Automotive and Industrial Products business achieved a strong sales growth of almost 10% and growth in operating margin of 120 basis points.

Avery Dennison News 22.10.02 RESULTS

Record Third-Quarter 2002 Revenues for Ballard

In the third quarter of 2002, Ballard Power System increased revenue to a record \$28m from \$9.7m in the same period in 2001.

Net loss rose to \$40.2m (including \$3m of costs to the integration of XCELLSIS and Ecostar and foreign

exchange losses of \$9.5m) from \$20.4m. Excluding integration related costs, the loss was \$37.2m. In support of cost reduction efforts, Ballard has suspended development of its 60kW stationary generator for re-evaluation when the automotive system on which it is based is further developed. Because hydrogen has emerged as the fuel of choice for Ballard's automotive customers, the company is exploring ways to leverage its world-class fuel processing technology.

Highlights of the third quarter included the unveiling of DaimlerChrysler's latest generation fuel cell prototype vehicles, the F-Cell, the completion of a year's operation of the DaimlerChrysler Sprinter Van, Honda's announcement of its first US retail customer for a fuel cell vehicle, and the deliver of fuel cells and fuel cell engines to a number of additional car producers outside Ballard's automotive alliance to further their fuel cell vehicle development programmes.

Ballard News 30.10.02 ENVIRONMENT; RESULTS

Third-Quarter 2002 Rise in Profit for BorgWarner

In the third quarter of 2002, BorgWarner made a net profit of \$31.9m, compared with \$18.4m in the same period of 2001. Sales rose to \$684m from \$559.9m.

The improvement came from strong volumes in new engine and 4WD business across the company's global customer base. Morse TEC increased revenue by 25.5% to \$266m, while ebit rose to \$34.9m from \$26.9m.

TorqTransfer Systems increased revenue to \$154.7m from \$114.4m and ebit to \$7.4m from \$2.5m. Transmissions systems increased revenue to \$124.7m from \$106.8m and ebit to \$16.3m from \$12m. The air/fluid systems operations increased revenue to \$93.9m from \$83.5m and ebit to \$4m from \$2.1m. The cooling systems operations increased revenue to \$62.2m from \$53.3m and ebit to \$6.9m from \$1.9m.

In the first nine months of 2002, net profit rose to \$109.1m from \$64.2m. Sales rose to \$2,030.3m from \$1,768.8m. Morse TEC increased revenue to \$778.2m from \$653.9m, TorqTransfer Systems to \$452.2m from \$369.1m, transmission systems to \$369.3m from \$320.6m, air/fluid systems to \$299.3m from \$269m and cooling systems to \$177.9m from \$169.6m.

BorgWarner News 22.10.02 RESULTS

Bosch Will Not Meet Profit Target

Bosch has said that it will not reach its target of achieving a pre-tax profit in 2003 equivalent to 7% of turnover.

In 2002, Bosch expects pre-tax profit to be at the 2001 level of Euro 1.4bn, while turnover should rise slightly from Euro 34bn to Euro 35bn as a result of acquisitions. Worldwide results in the automotive operations are stagnating and have fallen by 5% in Europe, while there has been a slight rise in US business. In 2001, automotive operations accounted for around 68% of Bosch's sales.

Handelsblatt 28.10.02

Third-Quarter 2002 Rise in Profit for Caterpillar

In the third quarter of 2002, Caterpillar made a net profit of \$213m, compared with \$205m in the same period in 2001.

Revenue rose to \$5.08bn from \$5.06bn. Sales of truck and bus engines rose sharply as fleet operators bought engines and trucks ahead of the 1 October 2002 introduction of tighter emissions standards.

Caterpillar News 16.10.02 RESULTS

Third-Quarter 2002 Improvement for Celanese

In the third quarter of 2002, Celanese increased ebitda, excluding extraordinary items, from Euro 88m to Euro 142m, as the profitability of the acetyl products, Ticona and acetate products segments improved.

Turnover fell to Euro 1.1bn from Euro 1.2bn, mainly as a result of currency effects. Operating profit rose to Euro 67, from a loss of Euro 16m. The improvement came mainly from lower raw material and energy costs, mainly in the acetyl products and Ticona segments, and from cost cutting through the group.

Handelsblatt 29.10.02 RESULTS

January-September 2002 Rise in Sales for Ceradyne

In the first nine months of 2002, Ceradyne increased sales to \$43.6m from \$33.3m in the same period in 2001.

Income for operations fell to \$2.6m from \$3.8m, and net income to \$1.7m from \$3.1m. In the third quarter, sales rose to \$14.3m from \$10.2m. Net income rose to \$662,000 from \$658,000. Ceradyne is encouraged by the rising level of shipments and record level of new orders. It must now focus on widening profit margins. A new manufacturing strategy is to be implemented by the Advanced Ceramic Operations aimed at reducing inventory and work-in-progress queue times. The emphasis will be on three core product lines - armour, diesel engine components and orthodontic brackets.

Ceradyne News 28.10.02 RESULTS

Third-Quarter 2002 Improvement for Ceradyne

Preliminary figures show that Ceradyne made a pre-tax profit of around \$1m in the third quarter of 2002, a rise of 17% on the same period in 2001.

Revenue rose by 40% to an estimated \$14.3m. Bookings rose by 38% to reach a record \$16m. Ceradyne expects growth to continue in the fourth quarter, with revenues totalling \$14m-26m, compared with \$12.1m in the fourth quarter of 2001.

Ceradyne News 7.10.02 RESULTS

Third-Quarter 2002 Profit for Cooper Tire & Rubber

In the third quarter of 2002, Cooper Tire & Rubber made a net profit of \$23m, compared with a loss of \$20m in the same period in 2001. Net sales rose to \$839m from \$791m.

Automotive sales rose by 14% to \$381m, reflecting new launches, increased content per vehicle and production increases at most global light vehicle producers. In North America, automotive sales rose by around 11%, while international sales rose by 20%. Automotive operating profit totalled \$27m. In the first nine months of 2002, Cooper made a net profit of \$88m, compared with \$47m on sales of \$2.5bn, compared with \$2.4bn.

Cooper Tire & Rubber 16.10.02 RESULTS

Third-Quarter 2002 Improvement for Cummins

In the third quarter of 2002, Cummins increased profit after taxes to \$39m from \$3m in the same period in 2001. Sales rose to \$1.65bn from \$1.4bn. The Engine Business increased sales by 35% to \$1.03bn. Revenues for the heavy-duty truck segment rose by 70%, and for the medium-duty truck and bus segment by 41%. Dodge Ram sales and a significant increase in engines for recreational vehicle led to a rise of 43% in revenues in the light-duty automotive and RV business. Engine sales to industrial markets fell by 7%. Revenues in the filtration and other segment rose by 12% to \$236m. The Holset Turbocharger business also showed an increase, with continued strong business in China.

Cummins News 17.10.02 RESULTS

Third-Quarter 2002 Results for Dana

In the third quarter of 2002, Dana increased sales by 7% on the same period in 2001 to \$2.6bn. Net income including non-recurring items fell to \$4m from \$13m.

In the first nine months of 2002, consolidated sales totalled \$7.9bn, comparable to the figure for 2001. Net income, excluding non-recurring items was \$139m, compared with \$19m. Dana adopted new accounting standard FAS 142, which resulted in a net loss for the first nine months of \$173m, compared with break even in the same period in 2001.

Dana News 25.10.02 RESULTS

Third-Quarter 2002 Improvement for Delphi

In the third quarter of 2002, Delphi made a net profit of \$54m, compared with \$33m in the same period in 2001. Revenue rose to \$6.4bn from \$6.2bn.

Growth came mainly from non-GM revenue, which rose to \$2.4bn from \$2bn, partly reflecting the strengthening of the Euro. Delphi won new business for its Passive Occupant Detection systems, engine management systems,

Mobile Multimedia products and aftermarket sales. Delphi's advanced common rail diesel injection system continued to grow strongly in Europe, increasing business with Renault to around £2.5bn and starting production for the new Citroen C3. Delphi was selected to supply advanced climate control technology for four Fiat vehicles produced in Brazil. It also won a contract from GM to supply full braking systems on future model minivans.

For the fourth quarter of 2002, Delphi expects revenue to range between \$6.7bn and \$6.8bn and net income between \$105m and \$120m. Full year revenue is expected to total \$27.2bn-27.3bn.

Delphi News Release 16.10.02 RESULTS

First-Half 2002/03 Rise in Profit for Denso

In the first half of its 2002/03 business year (to 30 September 2002), Denso increased operating profit by 17.4% on the same period in the previous year to Y 80.1bn.

Net profit rose by 181.3% to Y 106.47bn, thanks to a one-off profit of Y 112.2bn from altering the management of employee pensions. Group revenues rose by 4.9% to Y 1.14tn. The results were helped by the slight increase in Japanese vehicle production, despite the continuing effects of the slumping economy on vehicle sales. Sales to Japanese vehicle producers accounted for around 60% of Denso's revenues. The company has made significant progress in selling its air-conditioning systems to non-Japanese producers including Ford, GM and VW. For the full year, Denso expects net profit to total Y 146bn and revenue Y2.24tn.

Denso News 31.10.02 RESULTS

January-September 2002 Profit for Deutz

In the first nine months of 2002, Deutz made a net profit of Euro 2.1m, compared with a loss of Euro 19.7m in the same period in 2001.

Pre-tax profit doubled to Euro 30.7m, mainly as a result of restructuring measures. Turnover fell by 3.3% to Euro 845.2m. For 2002 as a whole, Deutz expects to break even.

Deutz News 28.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Dow Chemical

In the third-quarter of 2002, Dow Chemical made a net profit of \$128m, compared with \$57m in the same period in 2001.

Excluding one-time expenses, net income totalled \$148m. Sales rose by 5% to \$7bn. Dow has said that it was hindered by higher fuel costs and has announced spending cuts to combat the uncertain economy. The increase in sales reflects a 3% rise in volume and a 2% rise in prices. In the first nine months of 2002, Dow Chemical made a

net profit of \$471m, compared with a loss of \$348m. Sales fell to \$20.6bn from \$21.5bn.

Dow Chemical News 24.10.02 RESULTS

Third-Quarter 2002 Fall in Profit for DSM

In the third quarter of 2002, DSM made a net profit of Euro 88m, a fall of 12.8% on the same period in 2001.

For the fourth quarter, DSM sees no significant improvement in the economic climate and market conditions in the areas in which it operates. It still expects full-year operating profit to be substantially above the level for 2001.

Les Echos 28.10.02 RESULTS

First-Half 2002 Profit for Duarte

In the first half of 2002, Group Duarte of France made a net profit (group share) of Euro 0.4m, compared with a loss of Euro 0.75m in the same period in 2001.

The group made an operating profit of Euro 1.59m, compared with a loss of Euro 0.7m. Turnover fell to Euro 43.54m from Euro 45.72m. The first half performance was similar to that in the second half of 2001, because of delays in projects at vehicle producers. The group is confident of prospects for 2003, expecting a considerable growth in turnover and in operating profitability.

Autoactu 4.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for DuPont

In the third quarter of 2002, DuPont increased profit to \$469m from \$142m in the same period in 2001. The improvement came from sales to the strong housing and automotive sectors.

DuPont expects the US housing and automotive markets to remain strong and consumer spending to hold up 'reasonably well', leading to a large increase in earnings in the current quarter. Profits have also been lifted by a cut of over 8% in overall costs.

DuPont News 23.10.02 RESULTS

Third-Quarter 2002 Rise in Revenue for Dura

In the third quarter of 2002, Dura Automotive Systems increased revenue to \$586.8m from \$568.9m in the same period in 2001.

Strong growth from increased volumes in the North American car and RV markets, new business in North America and Europe and favourable foreign exchange, was offset by divestments and the weakness in the European automotive industry. Operating income before charges rose to \$33.1m from \$27.8m. Net income rose to \$6.6m from \$1.4m. In the first nine months of 2002, revenues fell by \$26.8m to \$1,870.3m, mainly as a result

of the disposal of non-core businesses, Operating income rose by \$7.5m to \$128.8m and net income by \$10.5m to \$35.7m.

Dura Automotive Systems News 22.10.02 RESULTS

Third-Quarter 2002 Results for Eagle-Picher

In the third quarter of its fiscal 2002 year (to 31 August 2002), Eagle-Picher Holdings made an operating profit of \$6.4m, compared with \$0.7m in the same period in 2001.

Net sales totalled \$169.1m, compared with \$169.5m. Net loss to common shareholders was \$7.3m, compared with a loss of \$13.9m. Sales in fiscal 2002 are expected to range from \$683m to \$687m.

Eagle-Picher News 15.10.02 RESULTS

Third-Quarter 2002 Rise in Sales for Eaton

In the third quarter of 2002, Eaton increased sales by 5% on the same period in 2001 to \$1.83bn. Net income before unusual items rose to \$90m from \$47m.

The figures were favourably affected by the adoption of Statement of Financing Accounting Standards No 142. The automotive operations increased sales by 13% to \$393m and profit by 27% to \$52m. The pace of new product introductions and gains in market share reflect heavy investments over the past few years in product development. The truck operations increased sales by 27% to \$322m and made a profit of \$45m, compared with breakeven. The increase in profit is attributed to extensive restructuring over the past two years.

Eaton News 14.10.02 RESULTS

Edscha to Increase Turnover

Edscha expects to increase turnover by over 20% to around Euro 950m, with the vehicle development business unit, IVM Automotive being the main driver.

IVM Automotive is being fully consolidated for the first time in 2002/03. Ebit will also rise as a result of the planned increase in turnover and further cuts in start-up costs at new plants. In 2001/02, Edscha saw turnover fall to Euro 777.18m from Euro 797.2m, while ebit rose to Euro 60.5m from Euro 58.6m.

Handelsblatt 10.10.02 RESULTS

January-September 2002 Fall in Sales for Engelhard

In the first nine months of 2002, Engelhard saw sales fall to \$2,842m from \$4,225.9m in the same period in 2001. Gross profit fell to \$493.6m from \$507.5m and net profit to \$115.3m from \$165m.

The Environmental Technologies business recorded sales of \$493.2m, compared with \$494.5m. In the third quarter, Engelhard made a net profit of \$2.9m, compared with

\$57.7m. Net sales fell to \$858.6m from \$1,143m as a result of lower prices and volumes for platinum group metals. The Environmental Technologies business increased sales to \$158.2m from \$149.2m as increased revenue from the automotive market was partly offset by lower demand from the power-generation market. Earnings fell by 43% to \$20m, reflecting factors such as increased development and start-up costs related to new technologies for diesel engines.

Engelhard News 24.10.02 ENVIRONMENT; RESULTS

Third-Quarter 2002 Rise in Turnover for Faurecia

In the third quarter of 2002, Faurecia achieved turnover of Euro 2,315m, a rise of 6.3% on a year earlier.

Turnover on car seats rose by 19.7% to Euro 962.4m, on vehicle interiors by 9% to Euro 810.5m and on front ends by 2.2% to Euro 134.9m. Turnover on exhaust systems fell by 18.3% to Euro 407.2m. In the first nine months of 2002, turnover rose by 0.5% to Euro 7,273m, with turnover on seats up 11.1% at Euro 2,936.2m, on interiors up 3.9% at Euro 2,523m and on front ends up 2.2% to Euro 440.6m, while turnover on exhaust systems fell by 20.7% to Euro 1,373.2m. If catalyst sales are excluded, group turnover rose by 6% to Euro 6.665bn after a 1% negative exchange rate factor. The growth in seating turnover is attributed to the ramp-up of new Renault Espace, Peugeot 807 and 307, Opel Vectra and Ford Expedition models. The exhaust operations were hit by the fall in precious metal prices and by exchange rate factors.

Les Echos 10.10.02 RESULTS

Nine-Months 2002 Results for Gentex

In the first nine months of 2002, Gentex, made a net profit to \$61.7m, compared with \$48.4m in the same period in 2001. Net sales rose to \$287.9m from \$230.6m.

Automotive revenues rose by 27% to \$271.5m. Around 50% of the auto-dimming interior mirrors shipped during the third quarter of 2002 has one or more advanced electronic features such as LED map lamps, compass and HomeLink. Full production of the new auto-dimming exterior mirrors with an integral LED turn signal was reached during the third quarter. In the first nine months, shipments of Night Vision Safety Mirror units in North America rose by 22%, while shipments to offshore customers rose by 24%. Unit shipments reached a record 6.5m from 5.3m.

Gentex News 15.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Goodyear

In the third quarter of 2002, Goodyear Tire & Rubber made a net profit of \$33.7m, compared with \$9.3m in the same period in 2001.

Sales fell to \$3.5bn from \$3.7bn. Tyre sales fell by 4% to 54.4m units. Currency effects knocked around \$4m off

worldwide sales and \$10m off earnings. In North America, Goodyear's tyre operations made an operating profit of \$10.2m, compared with \$87.9m on sales of \$1,738.1m, compared with \$1,957.2m. Sales fell to 26.5m units from 30.2m. In the EU, operating income rose to \$30.2m from \$3.1m and sales to \$846.8m from \$770.7m. 15.4m tyres were sold, compared with 15m.

In the first nine months of 2002, Goodyear made a net loss of \$0.6m, compared with a loss of \$29.6m in the same period in 2001. The figure includes \$10m in pre-tax earnings from Goodyear's participation in the Ford tyre replacement programme and a pre-tax charge of \$10m related to the closure of Penske Automotive Centers in the US. Sales fell to \$10.3bn from \$10.7bn and unit sales by 2.5% to 160.7m. In North America, the tyre operations made an operating loss of \$1.9m, compared with a profit of \$152.3m on sales of \$5,088.3m, compared with \$5,409.6m. Tyre sales fell to 79.1m from 84.9m. In the EU, operating income rose to \$81.3m from \$52.1m and sales to \$2,398.5m from \$2,329.7m. 45.3m tyres were sold, compared with 45.6m.

Goodyear is benefiting from the results of its initiatives to achieve top line growth and substantial earnings improvement and is to focus now on driving this change throughout North America and regain momentum in the consumer replacement market.

Goodyear News 30.10.02 RESULTS

First-Quarter 2002/03 Rise in Profit for Harman

In the first quarter of its 2002/03 business year (to 30 September 2002), Harman International Industries made a net profit of \$9.8m, compared with \$5m in the same period in the previous year.

Net sales rose to \$490.7m from \$399m. The Consumer Systems Group increased sales by 33% to \$389.8m. Sales to automotive customers rose by 48%, on substantial sales increases to European customers as Harman's new infotainment programmes came on stream for Audi, BMW, Mercedes-Benz and Porsche. Consumer audio product sales rose by 6% to \$73.6m, while Professional Group sales fell to \$101m from \$105m.

Harman International News 30.10.02 RESULTS

2001/02 Fall in Profit for HBS Technologie

In its 2001/02 business year (which ended on 31 July 2002), HBS Technologie of France made a net profit of Euro 0.6m, a fall of 7.3% on the previous year.

Operating profit fell by 7.2% to Euro 6.87m and turnover by 5.7% to Euro 84.9m. In the second half, the company made a net profit of Euro 2.21m, compared with a loss of Euro 1.61m in the first half. Operating profit rose to Euro 4.94m from Euro 1.93m and turnover by Euro 3.1m to Euro 44m. The company, which specialises in fasteners and protection for wiring and electronics, attributes the improvement to its 1000 Day Plan, launched in the second half and aimed at improving industrial competitiveness,

strengthening its commercial presence in Europe, the US and Asia, and turn the company into a systems supplier.

Les Echos 22.10.02 RESULTS

Third-Quarter 2002 Profit for Honeywell

In the third quarter of 2002, Honeywell made a net profit of \$412m, compared with a loss of \$308m in the same period in 2001.

Revenues fell to \$5.57bn from \$5.79bn, offset by cost cuts. In the first nine months of 2002, Honeywell made a profit of \$1,25bn, compared with a loss of \$217m, on revenue of \$16.4bn, compared with \$17.8bn. The company expects to have reduced its workforce to 106,000 by the end of 2002 from 115,000 at the beginning of the year.

Honeywell News 16.10.02 RESULTS

January-September 2002 Rise in Profit for Internet

In the first nine months of 2002, Internet increased net profit to \$8.6m from \$260,000 in the same period in 2001.

Operating profit rose to \$30m from \$23.2m, while net sales fell to \$620.6m from \$649m. In the third quarter, Internet saw sales fall to \$196.6m from \$197.3m, while net loss fell to \$1m from \$3.4m. As a result of the continuing rapid decline in European automotive sales, Internet expects its consolidated European plants to show a 14% fall in sales compared with plan. North American customers are expected to reduce orders early in December 2002. Sales in the fourth quarter of 2002 are expected to total \$195m-205m.

Internet has new business for programmes to start production in the next six months. The company has gained contracts worth over \$350m in 2002 for the supply of aluminium, ductile-iron, magnesium and zinc components to OEMs and Tier 1 customers.

Internet News 10.10.02 RESULTS

2001/02 Rise in Sales for Johnson Controls

In its 2001/02 business year (which ended on 30 September 2002), Johnson Controls increased sales to \$20.1bn from \$18.4bn in the previous year. Net income rose to \$601m from \$542m.

The Automotive Systems Group increased sales to \$15,014.6m from \$13,620.5m and operating income to \$862.8m from \$780m. Growth came mainly from new interior systems business involving seating, instrument panel, overhead, door and electronics systems. The inclusion of a French electronics business in October 2001, also contributed to growth. Interiors sales rose by 4% in North America, 22% in Europe and 7% in Asia, while there was a fall of 22% in South America.

The acquisition of the Varta operation has received all necessary regulatory approvals. The business is a leader in the development of batteries for 42-volt systems and hybrid vehicles.

Johnson Controls News Release 23.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Lear

In the third quarter of 2002, Lear increased net income to \$61.6m from \$15.7m in the same period in 2001.

Sales rose to \$3.3bn from \$3.1bn, boosted by the strong North American market and new global business, which partly offset lower vehicle output in western Europe and South America. In the fourth quarter, Lear expects sales or rise by 5-7%.

Lear News 18.10.02 RESULTS

Third-Quarter 2002 Fall in Turnover for Lisi

In the third quarter of 2002, Lisi (formerly GFI Industries) saw turnover fall by 8.6% on the same period in 2001 to Euro 120.4m.

In the first nine months of 2002, consolidated turnover fell by 9.3% to Euro 392.3m. Turnover on automotive operations, which account for 55% of turnover, saw a rise of 2.7%. The company is benefiting from the strong performance of the Peugeot group and Renault and the increasing use of equipment related to braking, safety and comfort.

Les Echos 10.10.02 RESULTS

Third-Quarter 2002 Rise in Sales for Littelfuse

In the third quarter of 2002, Littelfuse increased sales to \$75m from \$66.7m in the same period in 2001. Excluding sales of \$2m related to the acquisition in July 2002 of Semitron Industries, sales showed a 9% increase.

Automotive sales increased to \$24.9m from \$22.5m. Operating profit rose to \$5.8m, compared with \$1.5m and net income \$3.7m, compared with \$474,000. Despite the third-quarter improvement, cost reduction and cash flow remain high priorities. Littelfuse is achieving its milestones for the worldwide manufacturing rationalisation project and continues to trim operating expenses. In the first nine months of 2002, sales rose to \$214m from \$211.3m, with automotive sales rising to \$74.8m from \$70m. Operating income fell to \$11.9m from \$12.6m, while net income rose to \$7m from \$6.9m.

Littelfuse News 22.10.02 RESULTS

First-Half 2002/03 Rise in Profit for Matsushita

In the first half of its 2002/03 business year (to 30 September 2002), Matsushita Electric Industrial increased consolidated group sales to Y 3,537.2bn from Y 3,385.6bn in the same period in the previous year.

Domestic sales rose by 2% to Y 1,677.1bn and overseas sales by 7% to Y 1,860bn. Income before income taxes totalled Y 54.3bn, compared with a loss of Y 87.3m. The company made a net profit of Y 17.8bn, compared with a loss of Y 69.5bn. The AVC Networks operations increased sales to Y 2,055.7bn from Y 1,937.2bn. Sales of Car AVC equipment were 'solid'. The second quarter was affected by the continuing sluggishness of consumer spending and ongoing declines in capital investment by corporations and the apparent improbability of a rapid recovery in the Japanese economy.

Matsushita News 30.10.02 RESULTS

January-September 2002 Fall in Sales for Michelin

In the first nine months of 2002, Michelin saw sales fall to Euro 11.686bn from Euro 11.702bn in the same period in 2001 as a result of weakness of US and South American currencies.

Adjusted for foreign exchange rate fluctuations, sales rose by 2.7%. In the third quarter, sales fell to Euro 3.865bn from Euro 2.992bn. In the first nine months, the European market for replacement car and light truck tyres rose by 2.2%, but the North American market fell by 2.9%. Michelin has said that it is still on track to meet its 2002 growth targets.

Michelin News 24.10.02 RESULTS

First-Half 2002/03 Rise in Sales for Modine

In the first half of its 2002/03 business year (to 26 September 2002), Modine increased sales to \$548.2m from \$547.5m in the same period in the previous year. Earnings fell to \$16.7m from \$17m.

Results were boosted by the improvement in Modine's automotive and truck businesses. In the full year, Modine expects growth in automotive sales and performance improvements in its off-highway and building HVAC operations.

Modine News 16.10.02 RESULTS

First-Half 2002 Rise in Profit for Montupet

In the first half of 2002, Montupet increased consolidated net profit, group share, by 514.3% on the same period in 2001 to Euro 18.9m.

Operating profit rose by 17% to Euro 17.7m, while turnover rose by 3.2% to Euro 248.6m. Gearing fell from

100% to 62% and the company is seeking to completely eliminate debt by 2004.

Tribune 10.10.02 RESULTS

Third-Quarter 2002 Profit for Motorola

In the third quarter of 2002, Motorola made a net profit of \$111m, compared with a net loss of \$1.4bn in the same period in 2001.

Sales fell to \$6.4bn from \$7.4bn. The PCS (handset) unit saw sales fall by 2% to \$2.6bn, but made a net profit of \$241m, compared with a net loss of \$233m. The semiconductor unit made a net profit of \$13m, compared with a loss of \$418m, on sales up 13% to \$1.2bn. The wireless infrastructure unit made a net loss of \$22m, compared with a loss of \$996m. Sales fell by 42% to \$1bn.

Motorola News 15.10.02 RESULTS

January-September 2002 Rise in Profit for Noble

In the first nine months of 2002, Noble International made a net profit of \$5.5m, compared with \$2m in the same period in 2001.

Revenue rose to \$173.7m from \$95.3m. The increase came from the acquisition of the heavy equipment segment in the fourth quarter of 2001 combines with revenue growth at the automotive and logistics segments. The automotive segment increased revenues to \$86.8m from \$46.4m and pre-tax profit to \$7.4m from \$3.7m. The growth came mainly from increased production volumes, expanded production of additional platforms, and increased production efficiencies. Noble continues to enhance its leadership position in the laser welding industry.

Noble International News 21.10.02 RESULTS

Third-Quarter 2002 Rise in Revenue for Norsk Hydro

In the third quarter of 2002, Norsk Hydro increased operating revenue to Nkr 40,560m from Nkr 36,086m.

Operating income fell to Nkr 3,945m from Nkr 4,741m and net income to Nkr 513m from Nkr 1,333m. The decline in net profit came mainly from higher exploration costs. All business areas were negatively affected by the strengthening of the Norwegian kroner and the weakening of the US dollar. The Hydro Aluminium operations made an operating profit of Nkr 412m, compared with a loss of Nkr 372m.

Norsk Hydro News 21.10.02 RESULTS

Third-Quarter 2002 Rise in Sales for Owens Corning

In the third quarter of 2002, Owens Corning increased net sales of \$1.306bn from \$1.291m in the same period in 2001.

Operating loss was \$2.342bn, compared with a profit of \$63m, and net loss \$2.359bn, compared with a profit of \$27m. Asbestos-related liabilities of \$1.381bn for Owens Corning and \$975m for Fibreboard contributed to the loss. Income from ongoing operations totalled \$93m, which excludes \$35m of Chapter 11-related charges, \$44m of restructuring and other charges, and the \$2.356bn charge for asbestos-related liabilities. This compares with \$116m in the third quarter of 2001.

Owens Corning News 29.10.02 RESULTS

First-Quarter 2002/03 Profit for Parker-Hannifin

In the first quarter of its 2002/03 business year (to 30 September 2002), Parker-Hannifin made a net profit of \$61m, compared with \$60.6m. Revenue rose to \$1.59bn from \$1.48bn.

Sales in North America rose by almost 12%, while international sales rose by 23%. Parker-Hannifin expects customers in the heavy truck sector to have extended shutdowns over the Christmas/New Year period. The company is carrying out a restructuring programme.

Parker-Hannifin 15.10.02 RESULTS

Third-Quarter 2002 Rise in Sales for Pechiney

In the third quarter of 2002, Pechiney increased net sales to Euro 3.020m from Euro 2.752m in the same period in 2001.

Operating profit fell to Euro 95m from Euro 137m and the company made a net loss of Euro 14m, compared with a profit of Euro 9m. The aluminium conversion activities showed good resistance in a market marked by a sharp fall in aerospace shipments. Operating profit rose to Euro 15m from Euro 12m. The integration of the Corus operations will allow Pechiney to strengthen its position in the strategic aerospace and automotive markets.

Pechiney News Release 23.10.02 RESULTS

First-Half 2002/03 Fall in Profit for Pilkington

In the first half of its 2002/03 business year (to 30 September 2002), Pilkington made a pre-tax profit of £72m, a fall of 29% on the same period in the previous year.

Operating profit fell to £110m from £138m. The decline is attributed to customers cutting orders and the rest of the year is expected to be difficult, except in the UK and

Australia. Automotive sales have fallen for the year, but profits are above the previous year's level.

Pilkington News 30.10.02 RESULTS

First-Half 2002 Rise in Profit for Pioneer

In the first half of its 2002/03 business year (to 30 September 2002), Pioneer made an operating profit, under US accounting rules, of Y 13.99bn, a rise of 32.4% on the same period in the previous year.

The increase was driven by strong sales of flat-panel plasma display televisions and car navigation equipment. Net profit rose by 17.4% to Y 5.66bn and revenues by 9.8% to Y 333.29bn.

Pioneer News 30.10.02 RESULTS

January-September 2002 Rise in Turnover for Plastic Omnium

In the first nine months of 2002, Plastic Omnium increased consolidated turnover by 5.5% on the same period in 2001 to Euro 1.222bn.

Automotive sales rose by 9% to Euro 974.7m, with turnover on exterior systems up 10% at Euro 522.3m and the Inergy Automotive Systems joint venture showing growth of 8% to Euro 452.4m.

Les Echos 24.10.02 RESULTS

January-September 2002 Loss for PPG

In the first nine months of 2002, PPG Industries made a net loss of \$163m, compared with a net profit of \$304m in the same period in 2001.

The loss includes one-time after-tax charges of \$480m for the asbestos settlement, \$52m for restructuring, and \$9m for the cumulative effect of an accounting change, while the 2001 figure includes a \$71m charge. Sales fell to \$6.08bn from \$6.26bn.

The coatings operations increased sales to \$3,375m from \$3,338m and operating income to \$460m from \$359m. The glass operations saw sales fall to \$1,578m from \$1,745m and operating income to \$114m from \$233m.

PPG Industries News Release 17.10.02 RESULTS

Third-Quarter 2002 Improvement for Rhodia

In the third quarter of 2002, Rhodia made a loss of Euro 27m, compared with a loss of Euro 74m in the same period in 2001. Performance was hit by capital losses, mainly from the sale of the Rhodia Ster unit.

Ebitda rose to Euro 184m from Euro 105m, while sales fell by 4.8% to Euro 1.604bn, amid seasonal volume decreases. Rhodia is planning to sell Euro 500m worth of non-key assets in order to reduce debt to Euro 2bn by the end of 2002 from Euro 2.6bn at the end of 2001.

Rhodia News 28.10.02 RESULTS

January-September 2002 Sales at Saint-Gobain

In the first nine months of 2002, Saint-Gobain had sales of Euro 22.927bn, compared with Euro 22.932bn in the same period in 2001.

Sales in the glass unit rose by 0.5% to Euro 8.946bn, while the high-performance division saw a fall of 10.1% to Euro 2.77bn and the hosing division a rise of 2.6% to Euro 11.426bn. The company is to book a Euro 100m provision for asbestos-linked litigation in 2002.

Saint-Gobain News 29.10.02 RESULTS

First-Half 2002 Fall in Turnover for Sairp Composites

In the first half of 2002, Sairp Composites saw turnover fall by 23.5% on the same period in 2001 to Euro 7.23m. Net profit fell by 37.7% to Euro 0.53m. Sairp produces composite panels for CVs.

Sairp Composites News 24.10.02 RESULTS

First-Half 2002 Fall in Profit for Setforge

In the first half of 2002, Setforge of France saw net profit fall to Euro 0.6m from Euro 1.4m in the same period in 2001.

Turnover rose to Euro 56.3m from Euro 55.22m. Setforge, which produces forged parts for the automotive and aerospace industries, expects turnover in 2002 as a whole to total Euro 106m.

Autoactu 17.10.02 RESULTS

First Nine Months 2002 Rise in Profit for SKF

In the first nine months of 2002, SKF made a pre-tax profit of SKr 2,563m, compared with SKr 2,296m in the same period in 2001.

Operating profit rose to SKr 2,901m from SKr 2,703m, while net sales fell to SKr 31,765m from SKr 32,282m. The automotive division increased operating profit to SKr 430m from SKr 324m, and sales to SKr 11,363m from SKr 11,324m. In the third quarter of 2002, sales totalled SKr 3,553m, compared with SKr 3,540m in the same period in 2001, with sales of bearing and seal products to the car and light truck industry in Europe showing growth and sales in North America 'significantly higher'. The electrical division made an operating profit of SKr 284m in the first nine months, compared with SKr 251m, on sales of SKr 5,012m, compared with SKr 5,257m. Ovako Steel made an operating profit of SKr 4m, compared with a loss of SKr 33m, on sales of SKr 2,260m, compared with SKr 2,312m.

SKF Press Release 15.10.02 RESULTS

2001/02 Loss for SmarTire

In its 2001/02 business year (which ended on 31 July 2002), SmarTire Systems made a net loss of \$6.8m, compared with a net loss of \$5.5m in the previous year.

Gross revenue rose to \$1m from \$0.8m. Financial performance was affected by the extended delay of the US NHTSA rulemaking that requires the installation of tyre pressure monitoring systems in all passenger vehicles and light trucks from 1 November 2003. The results were also affected by the general downturn in the economy, the severe erosion in the stock market and 11 September.

The company has restructured its SmarTire (Europe) office to aggressively capitalise on emerging market opportunities, especially with European OEMs. Emphasis is now being placed on business development and the growth of new product lines. Ian Bateman has resigned as director of SmarTire's UK subsidiary, and a new position of general manager SmarTire (Europe) has been created and is filled by Nigel Hammond, UK business development manager, on an interim basis.

SmarTire News 25.10.02 PEOPLE; RESULTS

Third-Quarter 2002 Fall in Revenue for Southwall

In the third quarter of 2002, Southwall Technologies saw net revenue fall to \$16.3m from \$22.8m in the same period in 2001.

Net income fell to \$0.1m from \$2.4m. The decline follows five quarters of strong performance. Automotive product sales fell by \$4.6m, or 45%, mainly as a result of lower volume and lower average product sale prices.

Southwall Technologies News 23.10.02 RESULTS

January-September 2002 Fall in Revenue for Speechworks

In the first nine months of 2002, Speechworks International saw total revenues fall to \$26.8m from \$34m.

Operating loss fell to \$36.6m from \$38.3m, while net loss rose to \$36.1m from \$35.3m. In the third quarter, revenues fell to \$7.6m from \$10.9m, operating loss rose to \$13.6m from \$12.5m and net loss to \$13.3m from \$11.9m. Product licence revenues fell to \$12.7m from \$18.8m in the first nine months, and to \$3.1m from \$6.9m in the third quarter.

Speechworks is encouraged by the continuing interest in speech technologies and is confident that it will benefit from future improvements in the economy and the proven ROI customers are achieving across diverse applications and industries.

Speechworks News 28.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for STMicroelectronics

In the third quarter of 2002, STMicroelectronics made a net profit of \$131.2m, compared with \$35.8m in the same period in 2001.

Revenue rose to \$1.65bn from \$1.4bn, with growth coming partly from the acquisition of Alcatel Microelectronics. Organic growth from existing businesses increased revenues by 4.5% compared with the second quarter. The company expects continued growth in the current quarter.

STMicroelectronics News 22.10.02 RESULTS

January-September 2002 Rise in Revenue for Superior

In the first nine months of 2002, Superior Industries increased revenue to \$585.9m from \$474.4m in the same period in 2001.

Net income rose to \$55.8m from \$40m. In the third quarter, Superior increased net income to \$17.7m from \$10.7m, on revenue of \$187.4m, compared with \$146.4m. Superior has won several large contracts to supply aluminium wheels to major OEMs. These include wheels for the 2003 Dodge Dakota and Dodge Durango, and for GM programmes.

Superior Industries News 17.10.02 RESULTS

January-September 2002 Rise in Profit for Teleflex

In the first nine months of 2002, Teleflex increased net income to \$90.2m from \$83.1m in the same period in 2001.

Revenues rose to \$1.6bn from \$1.4bn. In the third quarter, net income rose by 19% to \$26.3m and revenue by 9% to \$508.2m. The Commercial Segment, which accounts for 52% of revenues, increased sales by 20% in the third quarter, reflecting gains in all three automotive, marine and industrial product lines. Teleflex supplies engineered products and services.

Teleflex News 16.10.02 RESULTS

Third-Quarter 2002 Profit for Tenneco Automotive

In the third quarter of 2002, Tenneco Automotive made a net profit of \$5m, compared with a net loss of \$2m in the same period in 2001.

Total debt was cut by \$14m as the company continued to generate positive cash flow. Revenue rose to \$856m from \$817m. OE revenue in North America rose by 15% on higher overall production volumes, including higher Class 8 CV volumes, to \$337m. Excluding catalytic converter pass-through sales, revenue rose by 16%. North America ebit rose by 64% to \$36m. In Europe, OE revenue fell to \$219m from \$221m. Lower volumes and delayed platform launches in the exhaust business more than offset stronger

ride control revenue due to new platform launches and stronger sales on existing platforms. Ebit was a loss of \$1m, compared with a profit of \$9m. Revenues in Australia rose to \$31m from \$27m, while in South America they fell to \$24m from \$32m. Revenue in Asia rose to \$30m from \$16m. Combined ebit for Australian, South America and Asia was unchanged at %5m.

Tenneco Automotive News 22.10.02 RESULTS

Third-Quarter 2002 Improvement for Timken

In the third quarter of 2002, The Timken Company increased net sales to \$628.6m from \$577.7m in the same period in 2001. The company made an operating profit of \$16.2m, compared with a loss of \$20.5m, and a net loss of \$10.9m, compared with a loss of \$30.5m.

The automotive bearings operations achieved ebit of \$2.1m in the third quarter, compared with a loss of \$7.9m, on sales of \$207.1m, compared with \$176.5m. The improvement came from strong sales volume and restructuring initiatives, partly offset by additional manufacturing costs to meet high levels of demand, while the automotive supply chain is restructured. In the first nine months of 2002, net sales rose to \$1,905.2m from \$1,873.6m. The company made an operating profit of \$62.8m, compared with a loss of \$6m, and a net profit of \$2.3m, compared with a loss of \$42.9m. Automotive ebit was \$21m, compared with a loss of \$9.4m, on sales of \$630m, compared with \$565.8m. Demand in the heavy truck segment is expected to slow in the fourth quarter because of the introduction of tighter emissions rules.

Timken News 16.10.02 RESULTS

Third-Quarter 2002 Profit for Tower Automotive

In the third quarter of 2002, Tower Automotive made a net profit of \$10m, compared with a loss of \$1m in the same period in 2001. Revenues rose to \$654m from \$558m.

In the first nine months of 2002, net loss (including the after-tax effect of one-off items) totalled \$115m, compared with a profit of \$28m in the same period in 2001. The expected fourth-quarter 2002 launch of the VW/Porsche SUV in Europe is the first significant launch from Tower's \$1.4m backlog.

Tower Automotive News 18.10.02 RESULTS

First-Half 2002/03 Rise in Profit for Toyota Gosei

In the first half of its 2002/03 business year (to 30 September 2002), Toyota Gosei made a group net profit of Y 11bn, a rise of 415% on the same period in the previous year.

Revenue rose by 9.4% to Y 161.41bn, boosted by increased output by vehicle producers in Japan and higher sales in North America.

Toyota Gosei News 28.10.02 RESULTS

Third-Quarter 2002 Improvement for TRW

In the third quarter of 2002, TRW increased operating earnings from continuing operations by 42% in the same period in 2001 to \$115m. Sales rose to \$3.9bn from \$3.6bn.

Automotive sales rose by 9% to over \$2.5bn a result of increasing production in North America, new products and stronger European currencies, all of which offset lower prices. Operating profit fell by \$3m to \$129m. In the first nine months of 2002, automotive sales rose by 4% to \$8bn. The automotive operations continue to focus on growth and cost base consolidation. New business awards in the third quarter were received from vehicle producers in North America, Europe and Asia/Pacific for electrically assisted power steering, airbags and associated electronics, seatbelts and tyre pressure monitoring system. Autocruise, the joint venture with Thales won a contract to supply an Adaptive Cruise Control System to a major European truck producer for trucks to be launched in Europe and North America in 2005.

TRW News Release 16.10.02 RESULTS

2001/02 Operating Loss for Tyco

In its 2001/02 business year (which ended on 30 September 2002), Tyco International made an operating loss of \$1,197.6m, compared with a profit of \$6,186.8m in the previous year.

The company made a net loss of \$9,122m, compared with a profit of \$3,970.6m. Net revenues rose to \$35,671.2m from \$34,036.6m. The electronics operations had net sales of \$10,526.1m and a profit of \$1,479.1m. In the third quarter, the electronics business, excluding Tyco Telecommunications, saw revenues fall by around 3% to \$306.5m and made a pro forma profit of \$306.5m, compared with \$703.1m. The declines were partially offset by revenue growth in automotive products and revenues from companies acquired in fiscal 2002.

Tyco News 24.10.02 RESULTS

Third-Quarter Profit for US Steel

In the third quarter of 2002, US Steel made a profit of \$106m, compared with a loss of \$23m in the same period in 2001. Revenue rose to \$1.91m from \$1.66bn.

The company benefited from the increase in domestic steel prices, partly resulting from tariffs imposed by the Government and partly from strong demand in the automotive industry. Prices for flat-rolled steel for cars, domestic appliances etc, are expected to rise further in the current quarter.

US Steel News 21.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Valeo

In the third quarter of 2002, Valeo made a net profit of Euro 31m, compared with Euro 11m in the same period in 2001.

Turnover fell by 4% to Euro 2.241bn, as a result of changes in consolidation and exchange rate fluctuations. Gross margin rose by 0.3 points to 17.3% as a result of industrial reorganisation and the policy of integrating suppliers.

Les Echos 18.10.02 RESULTS

Third-Quarter 2002 Improvement for Visteon

In the third quarter of 2002, Visteon made a net loss of \$52m, compared with a loss of \$95m in the same period in 2001, including a \$21m after-tax restructuring charge.

If a \$17m after-tax special charge for the European Plan for Growth is excluded, net loss totalled \$35m in the third quarter of 2002. Sales totalled \$4.3bn, a rise of \$622m. Non-Ford sales rose by \$181m to \$898m. For the first time, quarterly sales to non-Ford customers accounted for over 20% of revenue. Recent new business includes: a second major systems contract with Nissan; air conditioning compressors for DaimlerChrysler; in-vehicle entertainment system for the VW Sharan; interior, electrical, chassis and climate systems for the Ford Fusion; a new SUV for the European market; and a partnership with BMW to supply a wireless interface module based on Bluetooth technology for in-car mobile phone integration.

In the first nine months of 2002, net loss totalled \$318m, compared with a loss of \$104m in the same period in 2001. Sales rose by \$502m to \$13.9bn.

Visteon News Release 18.10.02 RESULTS

Third-Quarter 2002 Rise in Profit for Vitro

In the third quarter of 2002, Vitro, the Mexican glass producer, increased ebitda by 3.6% on the same period in 2001 to \$105m.

The company made a net profit of \$38m, compared with a loss of \$59m. The flat glass operations were affected by a drop in demand from the non-residential construction and automotive OEM segment, pricing pressures and increased costs. Consolidated sales fell by 1.4% to \$600m. Flat glass sales fell by 3.6% to \$285m, affected by slower than expected economic recovery in the US and lower volumes in the Mexican construction and automotive OEM markets.

Vitro News 23.10.02 RESULTS

Third-Quarter 2002 Profit for Wescast

In the third quarter of 2002, Wescast Industries of Canada made a net profit of \$12m, compared with a loss of \$9.8m in the same period in 2001.

Sales rose to \$97.3m from \$87.9m, driven by a rise in sales of cast and machined iron manifold to \$91.4m from \$78.8m. Tooling and prototype revenue fell to \$3.8m from \$9.1m. Third-quarter revenues include \$2.1m in brake and suspension component sales, representing shipments by Georgia Ductile during the post-acquisition period.

Wescast News 23.10.02 RESULTS

First-Half 2002/03 Rise in Revenue for Westport

In the first half of its 2002/03 business year (to 30 September 2002), Westport Innovations increased revenue to \$10.6m from \$9.2m in the same period in the previous year. The loss from operations fell to \$24.1m from \$26.9m.

Parts revenue rose to \$672,486 from \$534,113, reflecting the growing population of Cummins Westport engines in service. Expenses excluding the cost of product revenue fell by 9% to \$26.84m. In the second quarter, Westport increased total revenue to \$6.94m from \$6.13m and made a net loss of \$13.63m, compared with a loss of \$14.35m. Expenses, excluding the cost of product revenue fell by 15% to \$14.13m.

Cummins Westport continues to develop and launch new products, expand its presence in China and Asia and grow its North American market.

Westport News 25.10.02 RESULTS

PEOPLE

Reorganisation at Delphi

Delphi is realigning the company and appointing executives in order to intensify lean enterprise transformation and technology development, focus on customer and growth initiatives and oversee the resolution of under-performing businesses. The changes take effect on 1 January 2003.

The new business sectors will be: Dynamics, Propulsion and Thermal Sector, composed of businesses from Delphi Energy & Chassis, Delphi Saginaw Steering and Delphi Thermal; and Electrical, Electronics, Safety & Interior Sector, composed of businesses from Delphi Packard Electric, Delphi Safety & Interior, Delphi Delco Electronics and Delphi Product & Service Solutions.

Alan S Dawes, chief financial officer, has been appointed vice-chairman and chief financial officer. James A Bertrand retains his current position as president of Delphi Safety & Interior Systems, but has additional responsibility for the Automotive Holdings Group. Donald L Runkle has been appointed vice-chairman enterprise technologies and will be responsible for streamlining processes and will also oversee Delphi Technologies and Delphi Research Labs. Rodney O'Neal, executive vice-president of the former Safety, Thermal and Electrical Architecture Sector, has been appointed president of the new Dynamics, Propulsion and Thermal

Sector. David B Wohleen has been appointed president of the new Electrical, Electronics, Safety & Interior Sector. Jose Maria Alapont, at present president Delphi Europe, Middle East and Africa, has been named president international operations and vice-president sale and marketing, a new position.

Delphi News 22.10.02 PEOPLE

Appointments at Delphi

With immediate effect, Rafael A Fernandez, a present general director sales, marketing and planning at Delphi Safety and Interior Systems, has been appointed managing director of the unit' European operations.

Mr Fernandez will be based in Wuppertal, Germany. Paul C Kirsch, at present director of new business development at Delphi Packard Electric Systems, has been appointed global sales director at Delphi Safety and Interior Systems.

Delphi News 17.10.02 PEOPLE

Appointment at Delphi

Josep Maria Brun, plant manager at Delphi Energy & Chassis' San Cugat de Valles unit, has been appointed to the additional post of director Delphi Spain and Turkey.

La Gaceta de los Negocios 8.10.02 PEOPLE

New CEO for Foamex

Thomas E Chorman has been appointed chief executive officer of Foamex International with immediate effect.

Peter W Johnson, formerly president and chief operating officer, has resigned. Mr Chorman was previously executive vice-president, chief financial officer and chief administrative officer.

Foamex News 18.10.02 PEOPLE

CEO of Freudenberg-NOK to Take Early Retirement

Joseph C Day, chairman and chief executive of Freudenberg-NOK is to take early retirement in order to teach lean systems.

In preparation for his retirement, the company recently restructured its operations into two business sectors: automotive (OEM sealing and anti-vibration products), headed by sector CEO Richard E Allen; and distributed products (general industry sealing, automotive aftermarket and seal trading), headed by sector CEO Philip Damaska.

Freudenberg-NOK News 2.10.02 PEOPLE

New CEO for Goodyear

Goodyear Tire & Rubber has appointed Robert J Keegan, currently president and chief operating officer, to the additional post of chief executive officer with effect from 1 January 2003. Samir G Gibara, at present chairman and CEO, will remain chairman of the board.

Goodyear Press Release 1.10.02 PEOPLE

Appointments at Johnson Controls

Johnson Controls has appointed John Gorton group vice-president and general manager of Product and Business Development. Most recently he was vice-president and general manager of the Cockpit, Overhead and Door Systems Product Business Unit.

Brian Kessler has been appointed group vice-president and general manager of Customer Business Units, and will lead the Ford and GM business units on a worldwide basis and provide support to the European and Asian Customer Business Units. He was previously vice-president and general manager of the Ford Business Unit. Jeff Williams has been appointed group vice-president and general manager of North American Operations, with responsibility of manufacturing, logistics and supply chain management in North America. He was previously vice-president and general manager of JIT Operations in the automotive division. Larry Donaldson has been appointed vice-president of Quality and Quality Systems - North America. He was previously vice-president and senior executive of the Johnson Controls Leadership Institute.

Johnson Controls 1.10.02 PEOPLE

CEO of Morgan Crucible Resigns

Ian Norris, chief executive of Morgan Crucible is resigning because of ill health. Nigel Howard, chairman of the ceramics division, will take over as acting CEO.

Financial Times p26 10.10.02 PEOPLE

Appointment at PPG

Lorene C Boettcher has joined PPG as manager global design and colour marketing for its automotive coatings business unit.

Ms Boettcher, who was previously senior manager of global design for Seton's leather division, oversees PPG's advanced colour styling team and directs worldwide colour marketing activities for PPG's OE automotive coatings. She succeeds Marilyn White who has retired.

PPG News 22.10.02 PEOPLE

Appointment at TI Automotive

Richard Hein has been appointed vice-president of TI Automotive's HVAC product team. Mr Hein was previously the HVAC Product Team's commercial director.

TI Automotive News 24.10.02 PEOPLE

Appointment at TI Automotive

Rob Crawford has been appointed vice-president of TI Automotive's Brake and Fuel Group. He was previously commercial director of the product group.

TI News 8.10.02 PEOPLE

Appointments at Yazaki

Tetsuro Suzuki, chairman and chief executive of Yazaki North America is to return to Japan as general manager of Yazaki's Automotive Toyota Business Unit worldwide.

Satoshi Negishi, recently promoted to vice-president of Yazaki, now also becomes chairman of the board of directors of Yazaki North America, but will remain in Japan as non-resident chairman. George R Perry, president and chief operating officer of Yazaki North America, becomes president and chief executive.

Yazaki News 17.10.02 PEOPLE

LEGAL MATTERS

Honeywell Patent Infringement Dispute with BorgWarner

Honeywell has withdrawn its preliminary injunction against BorgWarner in a turbocharger patent infringement case, following an initial \$25m settlement.

BorgWarner has paid Honeywell \$25m in cash. In exchange, and in order to support its automotive customers, Honeywell is permitting BorgWarner to continue selling its KP39 variable geometry turbochargers covered by the injunction until June 2003.

Honeywell News 21.10.02

REVIEWS

Growth Forecast for Diesel Engine Production in Mercosur

Production of diesel engines in the Mercosur region is expected to rise by 12% in 2003 to 284,000 units. Exports are set to rise by 13% to 81,000 units.

Despite the growth, capacity utilisation rates will not exceed 40%, whether at independent producers such as MWM, International and Cummins, or vehicle assemblers such as Volvo, Scania and DaimlerChrysler. MWM plans to increase output by 9% in 2003 to 80,000 units and exports by 17% to 14,000. MWM will benefit from the start of production in Brazil of the Nissan Frontier and Xterra, which will be fitted with MWM diesel engines. Cummins hopes to sell 10,000 engines a year in China by 2005 and 20,000 on the US market. In Brazil, Cummins engines are found on 38% of new CVs under 4 tonnes. International, which produced 73,000 engines in 2001, expects to produce 80,000 in 2003, of which 43,000 will be for export.

O Estado de Sao Paulo 24.10.02 CV; PRODUCTION

Growth Seen for Navigation Systems

CSM Worldwide expects the navigation systems market to double between 2002 and 2007 to \$4bn a year.

Navigation systems are spreading from the luxury segment to a wide variety of segments, with SUVs and minivans expected to be the primary drivers of growth. Feature consolidation is expected to become a major trend in navigation system design. At present, systems have stand-alone displays, but there is a trend towards integrated Audio/HVAC/Navigation System head units, which are less expensive than stand-alone displays. The combined North American and European market is headed by SiemensVDO, followed by Harman/Becker, Bosch, Alpine and Visteon.

CSM Worldwide News 21.10.02

The Global Telematics Embedded Microprocessor Market

According to a study by Telematics Research Group (TRG), Motorola heads the market for embedded microprocessor units used in vehicle telematics applications.

Motorola's current share of the world market is estimated at 89.2%, while Hitachi's is 5.3%. In the US, there are an estimated 4m telematics-enabled cars and light trucks, many of which are OnStar and use Motorola components. Around 80 different models sold in the US are available with telematics and telematics is standard on many luxury trim packages and is increasingly available on SUVs and light trucks. The worldwide market for MPUs for telematics is put at 2,318,000 in 2002, compared with 1,741,000 in 2001.

Telematics Research Group News 17.10.02

Growth Forecast for DC Fractional Horsepower Motors

Demand for DC fractional horsepower motors is increasing as automotive application areas widen, according to a new study by Frost & Sullivan.

Increasing use in luxury cars, power electric rear-view mirrors and oscillating air conditioning vents are among applications expected to boost demand. Revenues are expected to rise to \$4.18bn by 2008 from \$3.73bn in 2001. Energy efficient permanent magnet DC or brushed DC motors are expected to dominate the market because they enable significant savings. However, brushless DC motors are gradually gaining market share as they offer longer life, higher efficiency, lower cost and lower maintenance. User demand for customised motors and an interest in a wide variety of designs are expected to boost the market.

Frost & Sullivan News 16.10.02

Global Response Sees Optimism for Telematics

Global Response, a telematics consortium of the world's largest motoring organisations, reports continued progress and optimism in the deployment of telematics systems worldwide.

Representatives of Global Response acknowledge that the emerging market for telematics and location-based services has seen erratic growth and widely varying expectations from investors, government agencies and the public. Telematics and the wireless Internet are expected to have a fundamental impact on the motoring experience, making driving more enjoyable, as well as enhancing safety, convenience and security. Global Response provides vehicle producers, telephone carriers and system suppliers with an established global partnering solution to telematics services, enhanced by the largest and most robust travel information and service delivery networks in the sector.

Global Response News 14.10.02

Growth Forecast for Remote Vehicle Diagnostics

According to a new study by Frost & Sullivan, Remote Vehicle Diagnostics (RVD) is gradually emerging as a potentially inevitable next step in the technological progression of the automotive industry, promising to reduce outlay on warranty, product development and marketing.

Retention of control over the after-sales service value chain is of strategic importance to producers in view of the implementation of the new competition laws in Europe. RVD will offer vehicle producers the opportunity to develop closer relationships with customers. Problems to be overcome before the use of RVD can become widespread, include: prohibitive infrastructure costs, particularly telecom; the management of technological obsolescence of component technologies; and limited bandwidth. In Europe, where a spate of introductions is expected over the next two years, the market is expected to reach 5.38m units by 2009. Revenues are expected to rise from Euro 180.51m in 2001 to Euro 1.88bn by 2009. The passenger vehicle market is expected to account for 95% of revenues by 2009. RVD is not expected to be introduced on its own, but bundled with other telematics services. In CVs, RVD installations are expected to be sustained by the fleet management benefits and is likely to be packaged with fleet management systems.

Frost & Sullivan News 10.10.02

Supplier Industry Back Resolution on US Steel Tariff Review

The Motor & Equipment Manufacturers Association, the Automotive Aftermarket Industry Association and the Specialty Equipment Market Association in the US strongly support the introduction of a House Concurrent Resolution urging President Bush to request the US

International Trade Commission to conduct an expedited and expanded review of the Section 201 steel tariffs.

The ITC is not required to complete its review of the steel safeguard programme until September 2003. The Resolution calls for completion to be brought forward by six months. The review would also evaluate the impact of the tariffs on automotive parts and components manufacturers as well as other steel-consuming industries. US suppliers, which traditionally source an estimated 95% of their steel from domestic sources, are facing a number of measures, such as lay-offs, plant slowdowns and shutdowns, and profit warnings.

Mema News 9.10.02

Supplier Sales to Grow by 75% by 2010

According to a joint survey by the German VDA, the Center of Automotive Research and PriceWaterhouse Coopers among 119 German suppliers, car suppliers' sales worldwide should grow by 75% between now and 2010.

The turnover of electronic components producers is expected to double during the period as the share of electrical/electronics systems in production costs rises from 25% to 40%. Germany is seen as well placed to benefit from the growth as it accounts for a quarter of world car production. Over Euro 6bn has been invested in eastern Germany and the VDA hopes to see the Leipzig region become a global electronics centre.

Les Echos 9.10.02

First-Half 2002 Rise in Turnover for French Suppliers

In the first half of 2002, the French plants of automotive suppliers increased turnover by 0.67% on the same period in 2001 to Euro 10.8bn.

Non-OEM sales rose by 5% to Euro 1.47bn. According to Fiev, 61% of the industry's turnover is generated by foreign firms with operations in France. These suppliers account for 65% of the sector's exports. The output of suppliers in France is expected to remain stable in 2002 as a whole and to fall by 1-2% in 2003.

Tribune 30.9.02

Mema in Alliance on Steel

the US Motor & Equipment Manufacturers Association (Mema), the Automotive Aftermarket Industry Association (AAIA) and the Specialty Equipment Market Association (Sema) are to cooperate to obtain relief for members affected by the US steel safeguard programme.

The alliance will seek a closer review by the US Government on the effects of the programme on producers of automotive products and will discuss future policy options. The Section 201 tariffs on imported steel, imposed in March 2002, have adversely affected automotive suppliers throughout the US. The programme imposed tariffs of up to 30% on imported steel and led to

an increase of raw material costs of 20-50%, slower deliveries and widespread shortages. US suppliers, who traditionally purchase an estimated 95% of their steel from domestic sources, are facing drastic measures such as lay-offs, plant slowdowns and shutdowns and are issuing profit warnings. US suppliers have begun to lose business to foreign competitors and the suppliers are being forced to import finished products that, previously, were made in the US.

Mema News 30.9.02

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