



Automotive & Road Transport Systems

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Automotive Industry News 2003-08-28

GPS RE-RADIATOR ENABLES INDOOR RECEPTION

Chronos Technology has introduced a Global Positioning System (GPS) re-radiating solution aimed at the aviation, naval and automotive industries.

GPS satellite navigation systems are now widely used in cars, aeroplanes and boats. The GPS signal is too weak to be received inside buildings, making it impossible to test the signal or demonstrate the product indoors. The re-radiating kit is designed to overcome this difficulty.

To use a GPS receiver indoors, the signal has to be received outside and then re-broadcast. A receiving antenna is placed outdoors, positioned to "see" as many satellites as possible. The signal that is broadcast provides positional information relating to this external antenna. The re-radiating kit has a range of about 30 metres for indoor reception. The system also employs a four-way antenna splitter connected to the re-radiating antenna to extend coverage.

Chronos offers a range of accessories for distributing GPS signals, and can provide a full installation service starting with designing the layout of a solution.

www.chronos.co.uk

LDV TO BRING EASTERN TOOLS TO UK FACILITY

LDV plans to transport the assets of recently acquired Gemini Tooling and Intellectual Property Assets, valued at £125m, from Daewoo facilities in both Poland and Korea to its manufacturing plant in Birmingham. This is the next significant step in the company's plans to launch a new light commercial vehicle range in 2004.

In this major logistics project the tooling and assets, weighing 6,250 tonnes, will require the use of 245 trucks and 18 low loaders, as the equipment moves, over a two-month period, from Poland and Korea to LDV's Drews Lane factory in Birmingham. Three large "Hemming" presses will require a special escort from Poland as they make their way across Europe to the UK. Unloading the trucks will take 33 days, working 16 hours per day.

Allan Amey, Chief Executive said "We are delighted to achieve this significant milestone in our planning for the launch of the new vehicle range. With the completion of this important stage we can focus our energies on the installation and commissioning of our new facilities.

"LDV engineers, who have been evaluating prototype vehicles for the past 18 months, are delighted with all aspects of performance and testing. We know that when we launch next year we will deliver class leading vehicles across our total product range."

LDV is currently holding wide-ranging discussions with potential distribution partners.

Automotive Industry News 2003-08-14

ATKINS TO AUDIT STRATHCLYDE TRANSPORT MODEL

Strathclyde Passenger Transport has commissioned Atkins Transport Planning to audit the latest version of the Strathclyde Integrated Transport Model. The model will be used to predict the effect of new transport projects in Glasgow and the surrounding areas.

The objective of the nine-week audit is to verify that the upgraded model has been delivered in compliance with the requirements that emerged from a scoping study carried out by Atkins in February 2000.

The upgrade involved a number of enhancements, including changes to the modelling software and expansion of the geographical coverage of the model. New survey data was also incorporated.

Atkins project manager Andy Lightowler says: "Models such as this play a crucial role in building an understanding of local transport networks and helping planners to predict the impact of very different transport measures. We will verify the effectiveness of the Strathclyde model to ensure it remains a viable transport planning tool serving those living or working in the region."

www.atkinglobal.com

Automotive Industry News 2003-08-07

STEADY GROWTH IN STORE FOR IN-CAR ELECTRONICS

Analysts have predicted solid growth for electronics systems and semiconductors in automotive designs as car makers add more infotainment, safety and comfort functions to their products.

According to a report from Strategy Analytics, "Automotive System Demand 2001 to 2010", legislative, environmental, competitive and consumer demands will drive up the market from through 2007.

Strategy Analytics said strong regional variations and heavy pressure on average selling prices will provide major obstacles to easy profits from the growing market. Among the different product types there are also widely varying growth rates, with dollar demand for powertrain systems only forecast to grow at 3.9% over the period 2002 to 2007, against a predicted 12.1% for safety and security systems.

For semiconductors, Chris Ryan, industry analyst for specialist semiconductor market researcher Future Horizons, said the biggest growth in chip sales in automotive will come from body electronics and infotainment, at close to 19% and 14%, respectively. Both research groups agreed that powertrain and safety-and-security systems will remain the largest dollar value segments in dollar terms.

Ryan said that, although Europe remains the largest vehicle-producing region, the fastest growth in production will come from the Far East.

Ian Riches, service director at Strategy Analytics, added: "It is the emerging vehicle producing regions that will see the greatest growth in the use of automotive electronics."

Automotive Industry News 2003-07-17

ONLINE AUTOMOTIVE TRAINING GOES EUROPE-WIDE

A group of academic and industrial organisations from across Europe has won funding of 470,000 euros from the European Commission's Leonardo da Vinci programme to create online training courses that will bring e-learning to the European automotive industry.

Partners include the University of Birmingham, whose School of Computer Science will be involved in delivering the web based learning packages as well as a CD introducing the project and examples of its new online courses. The first training package on 'crashworthiness' will feature a video and Powerpoint presentation by Professor Murray Mackay, honorary professor at Birmingham's School of Engineering and founder of the university's Automotive Safety Centre. Other courses will cover customer relationship management, production control, product process, and energy and environment in the automotive sector.

Project director Dr Cedric Ashley believes the real selling point is that people can train at any time of day, wherever they are, and do not need to leave their place of work in order to enhance their skills. "Now European automotive engineers and technicians will be able to gain all the new skills they need to enable them and their companies to reach their full potential and to stay ahead in a very competitive global industry," he said.

Automotive Industry News 2003-07-10

£15m training boost for UK automotive sector

The Government is putting £15m into a new initiative designed to boost recruitment into Britain's automotive industry.

The Automotive Academy will have a central hub in the West Midlands, with 11 delivery spokes in the nine English regions and the three devolved administrations. Objectives include setting up kite-marked training programmes, promoting flexible hands-on and e-learning and helping industry find solutions to training needs.

"This is extremely good news," commented Christopher Macgowan, chief executive of the Society of Motor Manufacturers and Technology. "The automotive industry is vital to the UK economy but we can only stay on top if we make sure that our people are trained to the highest standards to equip them for the future. The academy will act as a focal point for the very best in training in development."

The academy is one of the main suggestions made by the Automotive Innovation Growth team, a group of key industry figures set up to look after the competitive position of the UK's motor industry.

Announcing the Government funding, Trade and Industry Secretary Patricia Hewitt said that the country needs to invest if it is to maintain its role in the sector. "The British motor industry is already world class. It is currently exporting record numbers of cars, but in a fiercely competitive market we cannot afford to be complacent," she said.

Infineon pushes circuit speeds on SiGe

Infineon Technologies has claimed that researchers at the company have pushed the performance of circuits built using a silicon germanium process to speeds up to 30% faster than current records.

The company used bipolar circuits made with a silicon germanium with carbon (SiGe:C) process to reach a cutoff frequency of more than 200GHz and a ring-oscillator gate delay of 3.7ps. Using this process technology, the researchers fabricated and demonstrated three ICs: a 110GHz-plus dynamic frequency divider, an 86GHz static frequency divider and a 95GHz voltage controlled oscillator (VCO).

Infineon said that an integrated 77GHz automotive radar transceiver in SiGe, based on these

building blocks, is now feasible. Other devices and products benefiting from these research results in the short term, according to Infineon, will be 40Gbit/s low-power wireline communication systems, high-speed microwave radio links and ultra-wideband communication systems up to 60GHz.

A number of companies are working on 200GHz-plus SiGe technologies. Late last year, IBM said it had built transistors with cutoff frequencies of more than 200GHz using a 130nm SiGe process. Intel has reported that it is working on a 90nm SiGe process and Conexant Systems said last year it has a process that will support 200GHz cutoff frequencies.

Single-chip solution for car telematics

Analog Devices has announced the availability of its new Blackfin car telematics platform - a comprehensive, open solution based on the company's Blackfin processor. Cost reductions of at least 50% over current telematics system implementations are claimed for the new platform, achieved by providing a single-chip, software programmable platform that can function as navigation, communication and entertainment system.

Java support is also included, providing added benefits such as ease of programmability as well as interoperability and compatibility across multiple vehicle models. The Blackfin platform will enable motorists to perform a variety of functions such as receiving communications for automatic roadside assistance as well as remote diagnostics, downloading digital audio files and obtaining 'smart' transportation information.

According to analysts Allied Business Intelligence, the aggregate global market for telematics is expected to grow to over \$12.3 billion by 2007 from \$2.2 billion for 2001. Another report predicts that nearly 80% of new vehicles will feature telematics by 2006.

www.analog.com/blackfin_telematics

Automotive Industry News 2003-07-03

FRENCH AUTO-MAKERS OPEN NEW WIND TUNNELS

PSA Peugeot Citroën, Renault and CNAM have inaugurated two automobile aeroacoustic wind tunnels. The inauguration comes two years after PSA Peugeot Citroën, Renault and CNAM founded Souffleries Aéroacoustiques Automobiles (S2A), a consortium designed to establish a centre of excellence for automobile aerodynamics in France.

The two wind tunnels are located at a site adjoining CNAM's Aerotechnical Institute (IAT) in Saint-Cyr l'École, western Paris. The wind tunnels reproduce the various aerodynamic and aeroacoustic phenomena to which vehicles are subjected, offering modern, effective testing resources to help engineers cut fuel consumption and improve safety. Other aims are to improve acoustic comfort inside the cabin, and reduce vehicle noise.

The first full size wind tunnel will be used for aerodynamic and aeroacoustic testing. It is equipped with a rotating table, a moving platform, and a system for rotating car wheels. The second wind tunnel, built on a 2/5 scale, will be used solely for aerodynamic testing.

The project was funded two-thirds by the consortium and one-third by the French government.

POOR SALES BUG VW

Volkswagen is cutting 2,000 jobs in Mexico due to weak sales of its iconic "original" Beetle model.

Volkswagen has already announced that the last of the original Beetles will roll off the production line at the factory in Puebla, Mexico, later this summer. Now it has admitted that sales of the new Beetle model, also manufactured in Mexico, are much more sluggish than expected in the US.

The job cuts come because Volkswagen plans to reduce its output from Mexico by more than a

fifth.

Automotive Industry News 2003-06-05

LONDON TO TEST-DRIVE NATIONAL ROAD TOLL SYSTEM **Financial Times; May 29, 2003**

Trials to test national road pricing technology are being planned for London following the successful introduction of the congestion charge, the mayor's transport managers said yesterday.

Satellite and chip-based "tag and beacon" will be explored by Transport for London over the next 12 months. It would enable the capital to "stay ahead of the game", Malcolm Murray-Clark, director of congestion charging, told a TfL board meeting.

Similar trials have been taking place in Leeds, where the entire city has been mapped for satellite technology. But Professor David Begg, a TfL board member and chairman of the Commission for Integrated Transport, said London's advance on road pricing gave its proposed trials more weight.

"The clear view at TfL is that they can't wait for a lead from central government and have got to take the initiative themselves," he said.

Ken Livingstone, London mayor, said that with an established road pricing system, London was the obvious place to try out a national scheme.

TfL's move comes as Alistair Darling, transport secretary, prepares to engage industry leaders in ideas for tackling congestion across the UK at a seminar next month.

TfL is following the principles of road charging set out in Rocol, Road Charging Options for London, the technical assessment study which led to the implementation of the congestion charge.

The tag and beacon system would involve an electronic licence displayed on the car windscreen which would then be read by a roadside beacon. A more sophisticated system would involve the beacon reading and sending information to an "intelligent" tag, to communicate, for example, a variable charge which would then be deducted from credits stored by an owner's smart card.

Satellite-based systems, such as GPS, could track vehicles equipped with a chip as they passed into a charge zone. Many new vehicles already have such a chip and the TfL trials would probably use fleets of vehicles such as buses and taxis to see how foolproof the technology became.

But in the long term the biggest hurdle would be how to ensure that every vehicle was equipped with a chip.

Mr Murray-Clark later said: "We have proved this [congestion charge] technology works and Londoners respond to it. We are now more interested in using high-technology road pricing and we think we've got a very good basis for trialling that idea."

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Automotive Industry News 2003-05-22

TOYOTA TO SHIFT UP A GEAR

Toyota is taking on an extra 1,000 workers and adding a third shift at its Burnaston, Derbyshire plant. The Japanese auto maker wants to increase production capacity to back up an aggressive pan-European sales drive.

The changes will be introduced in the second quarter of 2004. Annual production at the site will rise from 220,000 vehicles to around 270,000 Toyota Corolla and Avensis. This will be the first time that Toyota will run a three-shift system in a vehicle plant. The increased production will lead to improvements in the firm's use of capacity and will increase European profitability.

Burnaston's sister plant in Valenciennes, France is also to get a third shift, lifting production from 184,000 to 240,000 Yaris models. Combined with its Turkish Adapazari plant, the new shifts will have a total production capacity of about 610,000 vehicles a year.

In addition to this, a joint venture with PSA Peugeot Citroën will begin manufacture of 300,000 entry-level small cars in the Czech Republic starting in 2005. A third of these will be branded as Toyotas.

CAR MAKERS FIRST WITH GROUP-WIDE IEE LINK

The Premier Automotive Group, consisting of manufacturers Aston Martin, Jaguar and Land Rover, has become the first UK-based group of companies to work in conjunction with the IEE, and Institution of Mechanical Engineers to launch an organisation-wide team of industrial liaison officers.

ILOs will act as the focal point of contact in the workplace for the two organisations, ensuring that regular and systematic contact is maintained with engineers and highlighting the routes to and benefits of professional registration.

Lead ILO Jo Bates said: "The Premier Automotive Group has a huge number of engineers, however the organisation acknowledges that in order to continue to develop the brands and stay at the forefront of automotive technology more are required."

PAG staff are being urged to attend a series of events aimed at raising the profile of chartered engineer status due to be held over the next few months.

BROADBAND ON THE MOVE

Firms specialising in digital television receivers and routing technology have partnered to create the first mobile broadband internet access solution using the DVB-T standard for digital video broadcasting as an overlay channel for GSM or GPRS.

The technology exploits underutilised frequencies in the spectrum used for digital terrestrial TV transmissions to create Internet hotspots that are kilometres in radius. As well as high data rates, the system is capable of providing broadband access in high-speed mobile situations, such as in trains, cars, or in public transportation.

The technology has emerged from co-operation between circuit producer DiBcom and UDcast, a supplier of IP routing solutions. DiBcom's DVB-T reception technology is capable of obtaining television and data reception at rates of up to 24Mb/s even in a vehicle travelling at a speed of 150km/h. UDcast, the first company to commercialise the Uni-Directional Link Routing standard protocol for Windows, has adapted its IP routing technology under Windows to the DiBcom platform.

The two companies say the new approach will help to lower lowering capital and running costs for telecom operators and broadcast content companies. "The possibilities for mobile Internet access today remain limited: with GPRS, the data rates are only moderately improved, and therefore the Internet access experience remains compromised," said DiBcom CEO Yannick Levy. "As for Wi-Fi solutions, they are limited in their geographic reach."

Automotive Industry News 2003-05-15

WINDSCREEN SPEAKERS "SAFER THAN HANDS-FREE PHONES"

Using a "talking windscreen" instead of a traditional mobile phone while driving could cut the risk of accidents, according to researchers at the University of Oxford.

Drivers are four times more likely to have an accident if they use a mobile phone, and there is increasing evidence that hands-free sets cause as many problems as ordinary mobiles. It is probably the driver's loss of concentration, rather than the effect of holding the phone, that leads to the increased risk.

Dr Charles Spence of Oxford University's Department of Experimental Psychology and Dr Liliana Read from the government's Department of Transport have discovered that drivers' concentration is influenced by the physical location from which they hear sounds. In particular, people taking part in their experiments found it easier to divide their attention between eye and ear if the sources of information came from the same direction.

Participants were asked to drive a car in the advanced driving simulator at Leeds University. A three-dimensional graphic scene of the outside world was presented on a screen in front of the windshield in real time. They were given a listening and speaking task while simultaneously driving around suburban and inner city ring roads. Two loudspeakers, one placed directly in front of them and one on the side, alternately played words that the participants were asked to repeat - known as "shadowing". People performed the combined driving and shadowing tasks much better if the voice they were listening to came from the loudspeaker directly in front of them, rather than from the side (as it would when holding a mobile phone to the ear).

This shows that people find it easier to look and listen in the same direction than in different directions. Dr Spence said: "These results highlight an important factor limiting a driver's ability to do more than one thing at once. However, there are some measures that car designers could introduce to increase safety, such as flat-screen loudspeakers placed by the windscreen in front of the driver. The safest way of avoiding accidents, however, is not to use a mobile phone at all while driving."

The research results have just been published in "Psychological Science".

<http://www.admin.ox.ac.uk/po/030508.shtml>

Automotive Industry News 2003-05-08

Perkins Chief to head EEF

The EEF (Engineering Employers Federation) has appointed Mike Baunton, one of the UK's most senior automotive executives, as its President. Mike has extensive knowledge of manufacturing in the UK and internationally, and is currently President of Perkins Engines Company Ltd and FG Wilson Ltd.

In addition, he is a Vice President of Caterpillar Inc responsible for the Compact Power Systems Division, which has over 6000 UK-based employees and sales of over £1 billion. The Division manufactures over 1000 diesel engines each day and 1000 power generation packages a week and also includes a marine engine packaging business.

He succeeds Paul Lester, Chief Executive of VT Group Plc, and will help drive forward the EEF's role as a leading provider of business services in employment relations, health and safety and environmental guidance.

Baunton's extensive experience includes President of the Society of Motor Manufacturers and Traders in 2002/3 and a Board member of Industry Forum, a unique SMMT/Industry/DTI initiative focussed on improving the productivity performance of the UK automotive industry. He is also a Board member of the Automotive Academy, and is a member of the DTI Motorsport Panel. Past experience includes membership of the first DTI Innovation and Growth Team, chaired by Sir Ian Gibson, which focussed on the automotive industry.

Commenting on his appointment, Baunton said: "I am delighted and honoured to take on this influential role at such a challenging time for manufacturing and intend to drive our agenda to emphasise the importance of innovation, investment, labour market flexibility, and skills. I will

ensure that the EEF continues to keep these issues at the forefront of the government's agenda, as well as providing our members with first class business services."

Automotive Industry News 2003-05-01

FUEL CELL VEHICLE CHALLENGES

All the fundamental challenges associated with developing fuel cell vehicles have been solved, according to André Martin, the managing director of Ballard Power Systems' European transport programmes. Future work needs to focus on engineering issues associated with improving performance, reliability and cost.

Vancouver based Ballard Power is one of the leading fuel cell manufacturers in the automotive field. Key investors in its technology include Ford and DaimlerChrysler. The company recently launched its Xcellsis HY-80 fuel cell engine, which was on display at the Hannover Fair.

Speaking at the Excellence in Fuel Cells conference, part of the Hannover Fair, Martin said: "The Exellsis has perhaps 85% of the performance of a conventional engine and fuel efficiency of 48%. We now need to work on reliability, length of use, cost and system integration."

Buses using the Ballard engine will appear on the streets of European cities, including London, over the next year. The Clean Urban Transport for Europe project involves 10 cities across the continent with a wide range of climatic conditions, from Stockholm in the north to Madrid in the south. The first bus is to be delivered to Madrid in May.

"The key is to make the technology as mature as any other," said Martin. "We don't have problems with functionality although the issue of water freezing and cold starts needs work."

FUTURE OF EC FUNDING FOR FUEL CELL IN DOUBT

There is a danger of conflicting messages emanating from the European Commission's (EC) sixth framework programme for research, technological development and demonstration, according to Shane Slater of engineering consultants Whitby Bird.

Slater is part of a project supported under Framework Five to run hydrogen fuelled buses in Cambridge UK and on the island of Gotland in Sweden, with the hydrogen generated from photovoltaic cells placed on the roofs of buildings.

Speaking at the Excellence in Fuel Cells conference at the Hannover Fair, Slater said there seemed to be a tension within the EC as to whether the sixth framework programme should focus on demonstration projects or fundamental research and development.

"People within the Commission don't seem to know what they want to do," said Slater. "Although they seem much more interested in basic research than demonstration projects. This is disappointing given the momentum developing in the United States."

In his State of the Union speech in January, President Bush committed to a \$1.2bn research programme to develop fuel cell vehicles. While the EC's Framework Five programme did back demonstration projects such as the one Slater is involved with in Cambridge and Gotland, if the momentum is not maintained, the benefits of projects such as this could be lost. Gotland was chosen as the city of Visby on the island is a world heritage city whose medieval wall is suffering from pollution from vehicles. Islands are also considered good sites for experiments such as this because they can be seen as closed systems where small-scale renewable energy projects can be analysed in their totality. Gotland is aiming to be a completely sustainable society by 2025.

Automotive Industry News 2003-04-24

MOTOROLA SHRINKS 90V CHIPS

Motorola has rolled out its latest power and mixed-signal process. The SmartMos8 MV process has transistors that can withstand voltages up to 90V but is designed to incorporate large quantities of logic alongside power and analogue circuits.

"As designers integrate computing power into more household and industrial devices, the need for SmartMos technology continues to grow," said Hak Yam Tsoi, director of the Motorola Semiconductor Products Sector SmartMos technology centre. "SmartMos8 MV is the technology for a whole array of products designed to help lower costs and improve system reliability."

To get the combination of 250nm logic transistors with 90V power devices, Motorola designed a specialised isolation scheme, based on a deep trench, to separate devices on the chip. The company said the size of both digital logic and high-voltage analogue blocks could be reduced by 50% compared with the previous generation of SmartMos.

Motorola said it is designing a variety of products using the new process for applications ranging from automotive safety components to telecommunications devices. The first products are expected to be available in 2004.

WORLD'S FIRST PUBLIC FILLING STATION FOR HYDROGEN

A filling station in Iceland has been equipped to manufacture and dispense hydrogen fuel to the general public alongside petrol and diesel. The Shell station is at Vesturlandsvegur, about four miles from the centre of Reykjavik.

The hydrogen is produced by electrolysing water, using equipment supplied by Norsk Hydro. Iceland's electricity comes from renewable sources (geothermal steam turbines and hydropower), so the energy chain will have very low carbon emissions.

The official opening of the station on 24 April also marks the launch of Icelandic New Energy's ECTOS (Ecological City Transport System) project. Three DaimlerChrysler Citaro fuel cell buses are due for delivery to Reykjavik in August, and will use the new station for their supplies of compressed hydrogen. The buses will go into public service in September for two years of trials in all seasons and weather conditions.

Iceland's government is committed to replacing fossils and creating the world's first hydrogen economy. The main research objectives of ECTOS concern the socio-economic factors involved in changing the energy base of a modern urban society. Reykjavik is ideal for trials of this kind, because small projects have a big impact. Three buses represent 4% of the total fleet.

www.newenergy.is

Automotive Industry News 2003-04-10

AUTHORITIES BACK LOCAL TRAVEL PLANS

The first round of UK local transport plans has received strong support from local authorities, who see it as a major step forward from previous policies, according to a review carried out by consultancy Atkins Transport Planning for the Department for Transport.

The new planning process was one of the major planks of the Government's 1998 integrated transport white paper and ten-year transport plan. Atkins's year-long study looked at the effectiveness of the LTP process, how local authorities have prepared their plans, and ways of addressing the main issues that have arisen. Some weaknesses exist in the new approach, its final report acknowledges, but these relate to how it is administered, financed and delivered rather than fundamental faults in the process itself.

Mixed performance against the DfT's guidance was, according to Atkins, a reflection of wider issue

of organisational capacity and political leadership. Several key challenges were identified: an emerging imbalance between LTP capital funding and local authority revenue, political buy-in and a frequent lack of a robust technical basis for deriving LTP targets.

"Staff and skills shortages within authorities and across the wider transport sector represent a major barrier to developing effective strategies," the report claims, although authorities are tackling the problem in a variety of ways.

Atkins project manager Jonathan Spear said the research shows that many authorities are still grappling with issues like a rapid increase in capital budgets, the introduction of greater democratic flexibility in transport investment and the need to work in partnership with other organisations.

"The last four years have seen a dramatic change in the way in which authorities plan and deliver their transport schemes and they now need a period of bedding down in order for the process to deliver on the ground," said Spear.

Spear added that it was important that the process should be retained, albeit with some changes and streamlining, for the second round of LTPs which will cover the period 2006-2001.

www.atkinsglobal.com

BUSES ON DEMAND

Sophisticated computer technology is at the heart of a pilot "Phone and Go" bus service in rural Northumberland. Passengers book their journeys by telephone, with buses routed to call at all the required pick-up points.

The University of Newcastle upon Tyne's Transport Operations Research Group (TORG) and Northumberland County Council are jointly managing the three-year, £750,000 project, which is evaluating demand-responsive transport (DRT) services.

Two Phone and Go services are operating in the Allen valleys and the Lower Coquet area, using air-conditioned minibuses with access for wheelchairs and pushchairs. The buses are currently making between 20 and 65 trips each day, as well as a coordinated school run. The only restrictions are the boundaries within which the routes are operated and certain timing points which allow the buses to connect with other transport services.

People wanting to use the service call the Travel Dispatch Centre (TDC), which is based in TORG's offices at the University of Newcastle. A dispatcher notes the journey details and uses the computer software to check how they fit in with previous bookings. If the dispatcher cannot offer the exact time or pick-up place the customer requires, several alternatives are offered.

The TDC then plots the most efficient route taking into account all the bookings and sends the information to a minicomputer on the bus using GSM text messaging.

Although similar schemes are operating elsewhere in the UK, the Northumberland project is the only one that is being fully evaluated. A team from TORG sourced and installed the vehicles and equipment, developed the TDC and is carrying out full monitoring and analysis to develop good practice for the future.

www.ncl.ac.uk/press.office/press.release/

TYRE SENSOR PREDICTS TROUBLE AHEAD

A tyre sensor that detects the condition of the road and warns drivers of risks in advance will be on show at this week's Hanover Fair in Germany.

The tyre sensor, developed by scientists at Bonn's Caesar research centre in collaboration with Goodyear, is a wireless device only a few square millimetres in size and is embedded in the rubber of the tyre tread. In the vehicle wheel casing there is an antenna which transmits a high frequency

radio signal to the sensor. The signal from the sensor changes according to the road condition and is sent back to the antenna several times per second. It contains information on the deformation of the tyre, which varies according to the condition of the road surface. For example, during aquaplaning a typical water bead is formed in front of the tyre. Or on snow or black ice the device will sense that the friction between the tyre and the road is lower. The sensor's measurements produce a characteristic curve for each situation, which in the future could be processed by an antilock brake system.

The sensor also continually checks tyre pressure, which is responsible for one in ten motorway accidents, according to French research.

Automotive Industry News 2003-04-02

HAZARD DETECTION PROJECT FOR MOTORWAYS

The Atkins consultancy is working on a project for the Highways Agency to evaluate and test sensor systems that could detect obstacles on motorways. The systems are needed to support next-generation traffic management applications that would make use of the hard shoulder as a running lane when appropriate.

Automated monitoring will ensure that traffic can be safely diverted to run on the hard shoulder and will prevent or suspend its use as soon as an obstruction is spotted.

A suitable detection system will need to pick up all kinds of potential hazards, such as pedestrians, vehicles or debris, whether moving or stationary and with or without metallic content. Atkins says that no single detector can meet all the requirements, so after drawing up specifications it will evaluate suitable products and make a shortlist for field trials to find the best combination of technologies.

www.wsatkins.com

Manufacturers of sensor systems that might be suitable for this application can contact Atkins project manager Jason Burns to find out how to take part in the project. Tel: +44 (0)1372 756330; fax: +44 (0)1372 740055; email: jason.burns@atkinsglobal.com

JOB PROSPECTS DOWN IN AUTOMOTIVE INDUSTRY, ACCORDING TO MANPOWER

Employment prospects in the UK's Automotive industry are at their lowest Q2 balance for the sector since 1999, according to the Manpower Quarterly Survey of Employment Prospects, the UK's longest running survey of employment trends.

The survey shows that a net balance of only 2% of employers working in Automotive manufacture will be taking on staff in the period April-June 2003. The net balance is down slightly quarter-on-quarter (down 1 point) and year-on-year (down 2 points). This puts the industry near the bottom of the sector league table.

The Manpower survey, in its thirty-seventh year of publication, asks 2,000 UK companies, across 11 regions and 21 industry sectors, if they expect an increase, decrease or no change in their staffing levels for the quarter ahead. A 'net balance' of job gains is calculated by subtracting the employers planning to decrease staffing levels from the number of employers planning to take on staff.

Hazel Detsiny, from Manpower, said: "Employment prospects in Manufacturing as a whole are below the national average and the Automotive industry is no exception".

Auto manufacturing contributes to poor employment prospects in UK manufacturing, which has reported a net balance of 4%, well below the national average of 11%. This is the lowest Q2 result for four years and the second successive quarter-on-quarter fall, suggesting the recent rally in prospects for Manufacturing may be over. 5 of the 7 Manufacturing sectors remain below the

national average (as well as Automotive, Textiles, Other Manufacturing, Electronics and Chemicals are all below 11%), driving the overall poor result. Only Wood & Paper and Food & Beverages are performing strongly in manufacturing.

All UK regions are planning to take on more staff in the second quarter. However, evidence of a North/South employment divide is emerging. The North West is now the best region for jobs, with a net balance of 18% of employers set to recruit staff this quarter. The North East has also reported its highest Q2 balance in 10 years. Wales, too, is in good shape with a net balance of 16% of employers planning to hire in the coming quarter.

The outlook is gloomier further south. The South West and South East are both below the national average, each reporting a net balance of 9%, the weakest Q2 job prospects in these regions since the early 1990s. Greater London, with a net balance of 7%, lies joint bottom, with Scotland, and is still suffering from a lack of confidence and the impact of results in the troubled Financial sector. Like last quarter, Small locations are most optimistic about employment prospects for next quarter with 18% planning to take on staff, well above the national average. Medium locations are in line with the national average, reporting a net balance 11%. Micro and Large locations are less likely to be taking on staff next quarter, although both have reported positive net balances (8% and 5% respectively).

BMW GROUP AND BRILLIANCE SIGN JOINT VENTURE CONTRACT FOR PLANNED PRODUCTION IN CHINA

The BMW Group and Brilliance China Automotive Holdings Limited today signed a contract for a production and distribution joint venture in China at the Great Hall of the People in Beijing. The signing paves the way for the planned local production of BMW cars in Shenyang, the capital of Liaoning Province in the North-East part of the People's Republic of China.

The contract was signed by Dr. Helmut Panke, Chairman of the Board of Management of BMW AG, together with Mr. Wu Xiao An, Chairman of Brilliance China Automotive Holdings Limited. Top ranking officials from relevant ministries in Beijing, Governor Bo Xilai of Liaoning Province, German Ambassador Mr. Broudré-Gröger and senior executives from both parties witnessed the signing of this milestone contract.

"The joint venture in China is a crucial step for the BMW Group", said Dr. Panke. "This will allow us to consistently expand and strengthen our position in one of the most important automobile markets of the future. We will offer authentic premium products to our customers in China, characterised by emotional appeal, uncompromising engineering, innovative technology, and high quality workmanship."

Mr. Wu said: "This joint venture between Brilliance and the BMW Group will allow both parties to tap into the vast potentials of the fastest growing automotive market in the world while giving many more Chinese consumers the opportunity to enjoy the renowned qualities of BMW Group products. The foundation of the joint venture is also a milestone for the Chinese automotive industry since it will set new standards for the production of automobiles and related services."

The written approval of the jointly prepared feasibility study was received from the State Development and Planning Commission on March 14 2003. The final stage in the procedure leading to the official foundation of the joint venture is the approval of the joint venture contract and the granting of the business license by the government authorities.

The joint venture will engage in the production, sales, and after-sales service of premium automotive products of the BMW Group. The start of production is planned for the second half of 2003. In the medium term, an annual production of around 30,000 BMW 3 Series and 5 Series vehicles is envisaged.

In Shenyang, the joint venture will incorporate essential parts of the new plant built in 1999 by Brilliance Auto, expanding these local operations into a fully-fledged production facility in line with the high BMW Group standards of quality worldwide.

The BMW Group and its Chinese counterpart each will hold a 50% share in the joint venture. A total of 450 million euros is to be invested by 2005. In the medium term, the joint venture will employ

approximately 3,000 staff. The local supplier industry is continuously being expanded. For the first generation of vehicles produced in China, local content of approximately 40 per cent is expected. The dealer network will be adapted continuously to the production volume.

The BMW Group regards the joint venture as a new milestone in its process of internationalisation. On the basis of its ongoing market offensive, the company is consistently strengthening its global presence and strategically opening up new markets, particularly among the rapidly growing markets in Asia.

Today, the sales network of the BMW Group consists of 27 own sales subsidiaries and some 3,000 dealerships around the world. Smaller markets are currently served by more than 100 importers. The BMW Group is represented in over 120 countries on all five continents. In addition, the company operates 23 production and assembly plants in 14 countries, including 5 in Asia (Malaysia, Vietnam, the Philippines, Indonesia and Thailand). No other premium manufacturer has recourse to such an internationally oriented network of production and sales.

With the joint venture in China, the company is adding a central pillar in Asia to this network, hence consistently implementing its Asia strategy. Over the next five years, the company is planning to increase its annual sales in Asian markets from around 80,000 to 150,000 units.

The company is continuing on a path of ongoing growth in China; customer deliveries increased in 2002 by 41.4 per cent to 15,500 vehicles (the Chinese mainland, Hong Kong and Taiwan markets). Following the USA and Germany, these markets have now become the third largest sales region for the 7 Series in the 2002 financial year. In the first quarter of 2003, the BMW Group expects a sales volume of around 4,400 BMW and MINI vehicles in Greater China, an increase of nearly 30% compared to the equivalent period 2002. The BMW Group anticipates a continuing upward trend particularly in the premium segments in China in the years to come.

Brilliance is convinced that its partnership with the BMW Group is an important move in its strategy to transform the company into a fully-fledged automobile manufacturer in China. The company believes the Chinese automobile industry will play a critical role in the future development of the global car market.

Brilliance states: "We are fully committed to the partnership with the BMW Group since the BMW Group has demonstrated commitment to China, and it has unparalleled strength in the development, production and sales of premium vehicles. Moreover, the BMW brand is among the most desired premium brands in China."

UNIVERSITY ARM TO RUN VEHICLE RESEARCH CENTRE

By Jonathan Guthrie, Midlands Correspondent
Financial Times; Apr 02, 2003

An offshoot of Warwick University has struck a partnership with Ford to create a £70m automotive research centre in the West Midlands.

Its mission will be to improve the performance of suppliers to Jaguar and Land Rover, both owned by Ford through its Premier Automotive Group subsidiary, safeguarding 50,000 jobs and encouraging future investment in the region.

The government is backing the initiative by providing £37m over three years through Advantage West Midlands, the regional development agency. The balance will come from PAG and from suppliers ranging from component makers to software businesses.

The automotive research centre will be run by Professor Kumar Bhattacharyya, founder of Warwick Manufacturing Group, an offshoot of the university that works closely with industry.

Prof Bhattacharyya is an adviser to the British, South African and Malaysian governments. He said the centre, which will be based at WMG near Coventry, would "be a catalyst to improving the supply base for manufacturers of premium vehicles. It will show an academic institution can make a real contribution to raising industrial efficiency".

Bob Dover, chairman and managing director of Land Rover and Jaguar, said the centre was "an important initiative" towards improving the UK's vehicle supply base. Many commentators regard this as inferior to the rival production networks of the US, Germany and Japan. Mr Dover said: "There is a worry that unless we can operate at world-class levels we cannot deliver world-class products."

The centre will undertake 20 research projects that WMG and PAG believe will help improve competitiveness in premium vehicle production. These range from finding ways to use advanced materials on production lines to extending the capacity of computers to simulate vehicle assembly.

The centre will also provide 150 engineering graduates a year, with the aim of easing the sector's problems recruiting managers and professionals. Prof Bhattacharyya said these students would receive sponsorship of about £14,000 each a year.

The deal cements the position of the West Midlands as the UK's main centre of automotive expertise. Nick Paul, of Advantage West Midlands, said the best practices it identified would be available to manufacturers to improve performance.

Delays to the launch of the new XJ saloon triggered losses of about \$500m (£320.5m) at PAG last year. The luxury carmaker is increasing its focus on cost-cutting and said earlier this year it would "moderate" its growth after two years of frantic expansion. The company hopes to make savings through increased sharing of parts and distribution between its different brands.

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Automotive Industry News 2003-03-20

LASER TRACKING SYSTEM IMPROVES CAR QUALITY

The Ford Motor Company has selected Leica Geosystems laser tracking systems for its inspection and measurement operations in its production plants. Ford has purchased eight systems to form the metrology foundation for a variety of manufacturing applications from assembly to tooling processes. The standardisation decision followed a major benchmark of current metrology systems in the marketplace. The implementation of the laser trackers and the replacement of existing systems begins this quarter. Leica has more than 1000 tracker systems installed worldwide.

The tracking system chosen by Ford was designed specifically for automotive applications and smaller measurement volumes. This high precision device delivers a measurement cycle for high point density (3000 points/second) with a measurement distance up to 25 metres. The versatile laser tracker can be deployed on its own or integrated into automated inspection and measurement programs. The device is also Intranet-enabled for remote tracker operations.

Automotive Industry News 2003-03-13

HYDROGEN SCOOTER LAUNCHED

A German inventor has developed the world's first hydrogen powered scooter, called an Aqwon. Josef Zeitler is the owner of the small company Independent Energy Systems.

The biggest problem is storing hydrogen. Zeitler developed a 50bar pressure tank in partnership with Hydrogen Storage Systems. The tank is designed to freeze should an accident occur, preventing an uncontrolled hydrogen release.

Aqwon's maximum speed is 31mph and the engine's power is 2.6kWh. Zeitler, who will officially launch the scooter at the Hanover trade fair in April, is putting the scooter on the market at 5,600 euros.

As well as being applicable to scooters, Zeitler believes the technology could be adapted to generate heat and electricity in domestic homes.

More details at: www.aqwon.com

Automotive Industry News 2003-02-27

Hybrid car does 200mpg

A post-graduate student at the University of Southampton has built a hybrid electric car which averages more than 200 miles per gallon. Dennis Doerffel, has adapted a conventional hatchback to run on lithium ion batteries linked to a petrol engine. The petrol engine cuts in when more power is needed than can be supplied by the batteries.

"More than 90% of all car journeys are less than 50 miles long," said Doerffel. "That is the range of the battery and it can be charged up overnight from a domestic power socket."

Dr Suleiman Abu-Sharkh, who supervised the work, said:

"We hope to find partners in the automotive industry to develop these sustainable transport ideas further."

Doerffel plans to enter a alternative vehicle race in Germany this summer.

Automotive Industry News 2003-02-20

PRODUCT LIFECYCLE MANAGEMENT SOLUTIONS ENHANCE PRODUCT DEVELOPMENT PLATFORM

IBM and Dassault Systèmes have signed a product lifecycle management (PLM) solutions contract with Daewoo Heavy Industries & Machinery Ltd (DHIM). The contract will help DHIM enhance product development and consolidate collaboration environments with CATIA V5 and ENOVIA software developed by Dassault Systèmes. PLM technologies will enable DHIM to maximise efficiencies surrounding the development of products such as forklifts and passenger car engines, and exploit the collaboration features afforded by PLM solutions.

IBM Korea Global Services will provide advice and deploy best practices that will ultimately reduce product development cycles by integrating processes including concept design, manufacturing and production. The ability of DHIM's 3000 employees to share design information in real time across the extended enterprise, and with international partners and automotive manufacturing customers, will gradually replace costly and time-consuming physical prototypes.

Automotive Industry News 2003-02-13

FORD AWARDS VEHICLE DEVELOPMENT CONTRACTS

IBM and Dassault Systemes have been selected by Ford Motor Company to supply and integrate IBM product lifecycle management (PLM) solutions into Ford's design and manufacturing processes worldwide. The long-term contract calls for the installation of CATIA V5 and ENOVIAVPM developed by Dassault Systemes, as well as process and methodology consultation from IBM and Dassault Systemes. Land Rover and Volvo Cars - part of Ford Motor Company - currently use IBM PLM solutions. Ford will integrate these solutions into its next generation C3P (PLM) systems environment across the company. Ford's decision for CATIA and ENOVIAVPM solutions will give Ford the agility required to respond dynamically to changing customer demand. V5 provides an enterprise-wide collaborative development environment that fosters innovation,

shortens development cycles and increases flexibility.

TRAFFIC MANAGEMENT TECHNOLOGY FOR THE MIDLANDS

Siemens Traffic has been awarded two contracts to provide car park guidance and driver information systems this year for the cities of Leicester and Nottingham. In Leicester there are more than 7500 off-street car parking spaces for public use. The Siespace system and 30 new variable message signs will be used to display information about car park occupancy in ten car parks throughout the city.

In Nottingham, the Siespace system will monitor 15 city centre car parks, and display car park occupancy information on four new variable message signs. For the first time, GPRS communications technology will be used in association with the system, which will result in significantly lower operating costs for the local authority.

Siespace collates data from the existing urban traffic control systems and also from "free-standing" car park data collection systems. The latter can be incorporated into the Siemens COMET urban traffic management and control system to display all relevant information in one common format.

First line fault diagnosis from privately-owned car parks can be checked through the system and signs can be set automatically through the implementation of strategies on the road network. These features improve the overall network management capability. By providing additional information on car park availability and route guidance, visitors can be guided to their destinations, reducing driver frustration, queues and circulating traffic.

MOBILE TECHNOLOGY INTEGRATES WITH IN-CAR ENTERTAINMENT SYSTEM

Wireless hands-free technology could allow the car driver to enjoy seamless and simple integration of their mobile phone and PDA with the car's entertainment system. Pi Technology has supplied Ford with software to enable the use of in-vehicle Bluetooth technology.

Ford's Model U concept vehicle, shown at the 2003 NAIAS in Detroit, is the first vehicle to use Pi Technology wireless software. The vehicle's entertainment system allows any Bluetooth enabled cell phone to operate in a hands-free mode, without having to plug-in the phone. The software also allows for the vehicle and a PDA, in this case a Compaq IPAQ, to share data.

According to Pi, the Model U provides for the sharing of calendar, task list and contact information. The software has been integrated with the Ford VCSI Java Framework to enable this additional functionality. The technology exists to enable a driver to say, for example, "Dial John" and a combination of the phone and PDA determines the required number and places a call. Other potential features include the ability to unlock a vehicle using a PDA, an interactive owner's manual and the ability to configure complex vehicle settings. Pi has also demonstrated a system to access OBDII diagnostics over Bluetooth.

Automotive Industry News 2003-01-23

GM RECONSIDERS DISPOSALS

The board of General Motors will next month consider revised plans for a sale or possible leveraged buy-out of Hughes, the carmaker's communications subsidiary and its DirecTV satellite business.

GM directors are due to receive a detailed presentation on February 4 of options for Hughes following the collapse last December of the company's \$18bn-\$20bn sale to EchoStar, DirecTV's main satellite-TV rival.

Jack Shaw, president and chief executive of Hughes, is understood to have urged GM to end uncertainty surrounding Hughes, which lost \$467m last year amid intense competition for pay-TV customers.

Next month's presentation will outline four options for Hughes, comprising a possible trade sale, IPO, a buy-out supported by private equity groups or retention of the business.

Mr Shaw earlier this month played down the prospects of a management buy-out, while Rick Wagoner, GM chief executive, pledged to reach a decision on the communications business "within 60 days".

News Corporation, the media group led by Rupert Murdoch, is poised to revive an offer for DirecTV if GM opts to seek a trade buyer. The company has held preliminary discussions with GM following the carmaker's decision to abandon the EchoStar deal in the face of strong regulatory opposition.

Mr Murdoch, however, was also said to be considering a rival proposal to acquire control of EchoStar.

Charlie Ergen, EchoStar's chairman and chief executive, is understood to have contacted News Corp at the end of last year to discuss a possible deal. People familiar with the matter said there had been no further discussions between the two companies since then.

Mr Ergen and his family control 47.7 per cent of EchoStar, which has a market capitalisation of almost \$13bn.

News Corp and EchoStar declined to comment.

Although Mr Murdoch regards a bid for Hughes as his first priority, an offer for EchoStar's Dish Network could deliver an alternative satellite presence in the US.

Industry analysts, however, questioned the likelihood of an EchoStar-News Corp deal. Aryeh Bourkoff, at UBS Warburg in New York, said: "If the report of the discussions is actually true, we believe such discussions are more likely indicative of a tactic to delay the potential DirecTV merger with News Corp."

Other industry observers said the prospect of a bid for EchoStar could prompt GM to speed up negotiations with Mr Murdoch rather than risk being left without a buyer for DirecTV.

GM refused to comment.

Automotive Industry News 2002-11-28

Cars get Bluetooth

IAR Systems has released a Bluetooth stack for cars. Version 1.30a of its Embedded Bluetooth Protocol Stack is optimised for small, cost-sensitive embedded applications. The company's Bluetooth protocol stack is already used by major industrial, telecom and consumer giants worldwide. The new stack adds car hands-free profile to add Bluetooth wireless technology to the next generation of car models. Future versions will include further automotive profiles, says the company. "Our new Bluetooth protocol stack supports our strategic focus on the automotive industry, as it provides Bluetooth functionalities required by the car manufacturers and their suppliers," says Magnus Enemyr, product manager at IAR Systems in Sweden. "At the same time, we can help the automotive industry reduce their production cost due to our highly optimised implementation." The stack is delivered as ANSI-C source code and comes with the IAR MakeApp stack configuration and code size optimisation tool. The new version supports the most commonly used stack protocols and profiles and works with all major Bluetooth chip-sets.

www.iar.com

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