

mapmechanisms

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Welcome to issue 11 of *MapMechanisms*, the regular newsletter of Kingswood MapMechanics.

You'll notice a new look logo in this issue, reflecting the fact that the world of digital mapping and geographic information systems is constantly evolving, and we're moving forward with it.

The common thread is the expertise we bring at MapMechanics. We specialise in providing and setting up map data and applications for you, and helping you use maps to meet your business objectives.

We are now increasingly referred to as the MapMechanics, which is why you'll see that name (and the associated new logo) applied increasingly to our business in future.

INSIDE



Demographic data underpins Buy As You View's growth



Truckstops fine-tunes exhaust deliveries

**New data releases
New data catalogue**

Enhanced drive-times stand up to scrutiny of Wal-Mart board



By introducing an advanced drive-time calculation system from MapMechanics, using real-life road speeds to determine catchment areas, retailer ASDA (part of the Wal-Mart group) is improving and speeding up the process of evaluating proposed store locations.

Strategic Development Manager Neal Stevenson says it is "undoubtedly the biggest single development in routing systems that I've experienced in my career."

In the past, when ASDA evaluated a potential location for a new or improved store, it used a combination of desktop GIS analysis and a comprehensive catchment visit to assess the quality of the site relative to the strength of the surrounding competitors.

Part of the 'on-the-ground' catchment analysis included driving key roads and producing a hand-drawn catchment area which was subsequently digitised into the GIS before analysing market and demographic data.

Neal Stevenson explains "Whilst there have always been GIS systems which are capable of producing isochrones around specific locations, and these are adequate for some uses, we have always had some concerns with the fact that the isochrones did not always look realistic due to the way the system treated road speeds. As a result we preferred to physically do the drive-time research ourselves, for single store decisions, because it was the only way we could be confident of presenting real-world travel time data that would stand up to scrutiny by the Board and our retailers."

The new MapMechanics Enhanced Isochrone Model calculates drive-times with GeoConcept using NAVTEQ street-level data with ITIS road speeds. The speeds are derived from real-world data constantly gathered by ITIS from a pool over 50,000 vehicles in

regular service, whose position is pinpointed by GPS (Global Positioning System).

"The great thing about this system is that the road speeds are averaged over multiple journeys, so we can be confident that they're realistic," Neal Stevenson says. "This is a huge advantage. By contrast, when we actually drive the routes, we're subject to the vagaries of bad weather, road works, unduly heavy traffic and other local anomalies."

A further attraction of the Enhanced Isochrone Model is that it can calculate drive-times from multiple points simultaneously, whilst still using the real-world ITIS road speeds supplied with the NAVTEQ data. So it is applicable to large-scale analytical exercises as

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well as one-off projects.

ASDA has used other drive-time calculation systems in the past.

"Previous systems have proved acceptable for large-scale, multiple store, exercises," says Neal Stevenson, "but they tend to apply the same road speeds to all roads of the same class in the same geographic region, without reference to any local issues such as traffic lights, congestion hotspots or the time of day. The MapMechanics system takes account of all these factors, so it produces a more precise and detailed result, which is ideal for planning ➔

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MapMechanics underpins Buy As You View's rapid growth

Demographic data from MapMechanics has proved a decisive factor in the rapid growth of specialist TV and consumer goods retailer Buy As You View. Having more than doubled its customer base in five years, the company now aims to increase it by over 50 per cent more in its current five-year plan – taking it to four times its size in the late 1990s.

IT director Martin Greenhalgh says the demographic tools supplied by MapMechanics have been fundamental to this vigorous growth. "The system has proved invaluable at helping us identify new territories reliably, without having to go through a lengthy 'trial and error' process," he says.

Buy As You View allows consumers on lower incomes to pay for high-quality television sets literally as they watch, using a special coin meter. With this system, unlike rental, they end up owning the set. More recently, the service has been expanded to allow customers to buy a whole host of other goods through the same payment mechanism, including electrical appliances, furniture, sporting equipment and lifestyle products. Buy As You View stocks and supplies all goods through

its own resources.

Having grown steadily over the past thirty years from its original base in South Wales, the company decided in the late 1990s to expand into other parts of Britain, and needed to identify areas with an appropriate demographic mix. Typically this meant areas with a high concentration of lower-income families, often living in smaller

Sunderland area of the North East as a particularly promising territory (no fewer than 50 per cent of households met the required criteria), so the company opened its first regional base there. It quickly proved a success, so within 18 months the company repeated the process, and this time homed in on the Rotherham area of South Yorkshire.

That base too proved profitable



housing units, perhaps in locations that had seen extensive industrial upheaval in the past.

"Although we could have made educated guesses about likely locations, we needed to adopt a more scientific approach that would provide the maximum potential."

MapMechanics supplied the company with PRiZM demographic data, which Martin Greenhalgh's IT team was able to cross-reference with existing customer data. There was a clear correlation between those customers and the households covered by 15 of the 60 main PRiZM categories. "This provided us with a good 'fingerprint' for the PRiZM categories we were looking for," Martin Greenhalgh says, "so we were then able to apply the same criteria to other parts of the country."

That analysis revealed the

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Martin Greenhalgh, Buy As You View

quickly, so on an accelerating timescale the company then opened further bases at Coleshill (Birmingham) and Warrington (Lancashire). All of them have lived up to expectation.

Whilst the original PRiZM dataset was supplied at postcode sector level, more recently the company has upgraded to using data at full unit postcode level, which provides a much more detailed picture of target neighbourhoods. "This has helped us manage our direct sales force more effectively by identifying the exact streets offering best market potential." ■

NEW DATA RELEASES

New 2004 street-level data sets include new versions of Andes raster and NAVTEQ vector streets. Both data sets are fully updated and now benefit from key additions to the UK sets, such as the M6 toll road and Northern Ireland.

Other new detailed rasters include the OS 1:50,000, 1:25,000 and StreetView rasters – the larger scale data sets offer the benefit of OS cartographic styling and extra features, but are larger than many other street maps so you will need additional storage. In some standard formats StreetView is 13.8 GB or more.

New OS Boundary Line (May 2004 release) provides the latest electoral ward, civil parish, unitary authority, county and political boundaries.

Mapflow Raster 2004 release includes improved road network and changes to styling and colouring to make the maps look more like Great Britain maps and improved road network.

Update your mapping for the whole world with the new 2004 Global Insight Plus data. Includes roads, rivers, rail network, airports (including name and 3-character IATA code) together with administrative boundaries, named palaces, urban sprawls and many other features.

Wal-Mart *continued from page 1*

new stores. We will never move away from visiting the site in order to get a qualitative view of the catchment, but with the new system we're confidently expecting we'll be able to throw the digitising board away."

He adds: "I've been waiting years for a product like this to come along, it's the future. I've never seen an isochrone calculation system that comes anywhere near the accuracy of this one. It produces results that I can confidently put in front of the Wal-Mart Board." ■



TruckStops fine-tunes Tuborex exhaust deliveries for Lloyd Fraser

Interactive drag-and-drop capability adds finesse to daily scheduling task

Logistics group Lloyd Fraser, working on a long-term contract for exhaust systems manufacturer Tuborex, is using the TruckStops routing and scheduling system and according to group logistics director Les Corbett: "It's proving ideal in this application."

Simon Hall, Lloyd Fraser's senior transport supervisor at Tuborex, says TruckStops is particularly effective because of the way it automates the load and route-planning process, yet still offers plenty of interactivity. This means the operator preparing the schedules can take control manually once TruckStops has completed the optimisation process, taking account of unexpected changes to the intended delivery pattern. "For instance, we may be able to slot in drops that fall outside the planned rounds for that day."

Tuborex offers guaranteed next-day delivery to customers ordering by 5.30pm, handling nationwide distribution of its 900 product lines from a single warehouse in Staffordshire. To maintain a logical and economical delivery system, the company offers delivery on fixed days of the week to its customers. It also allows them to place ad hoc orders on other days – for instance, when

there is an urgent need to top up stocks.

Lloyd Fraser says TruckStops has proved ideal for implementing this scheme. Within the software, the company has set up different sets of delivery resources for each day of the week, focusing on the parts of the country served on that day. When customer orders come through from Tuborex's QAD order processing system, TruckStops assumes they will all fall within the expected regions; but it will still attempt to schedule deliveries that fall outside the expected areas.

Sometimes this will be possible; but if not, Simon Hall and his team can intervene manually to ensure



that all orders are still delivered. TruckStops includes a drag-and-drop facility, by which calls can be moved interactively on a screen map to different points on the optimised journey suggested by the system, or transferred to a different vehicle. TruckStops will immediately recalculate the affected routes, ensuring that time, weight and delivery window limits are not exceeded.

"We might have personal knowledge of particular drops," Simon Hall says, "and be aware that a given delivery will take less time than expected, or a given customer won't mind taking delivery outside the preferred time. That means we can sometimes shuffle drops around to make space for additional deliveries. We work with TruckStops to reach the best overall solution."

When an ad hoc delivery falls too

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Simon Hall, Lloyd Fraser

"Because TruckStops allows us to utilise our vehicles so much better, we've been able to keep some resources in reserve" Simon Hall, Lloyd Fraser

far outside the calculated schedule to be handled by any of the allocated vehicles, the traffic team may decide to run a special trip. "Because TruckStops allows us to utilise our vehicles so much better, we've been able to keep some resources in reserve," Simon Hall says.

Occasionally it is simply not possible or viable to use an extra vehicle, in which case the part is despatched by express carrier instead. ■

DATA UPDATES

New postcode releases Unit postcode points are available quarterly, so now you can upgrade your maintenance contract to more frequent updates to ensure you always have the latest postcodes in your geocoding file. For more detailed positional information choose the Code-Point new quarter 2, 2004 release.

Postcode sector release 38 and new demographic data The latest changes to postcode sectors, districts and areas are now available and MapMechanics has also created Census data to match these boundaries. Daytime population and distance travelled to work information is now complete and included in release 38 Census packs. Now with daytime population and distance travelled to work. Reaggregated to R38.

speed deliveries

- easy-to-use
- fast
- saves time
- saves money

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TruckStops
ROUTING & SCHEDULING

Corporate Briefing

7 SEPTEMBER 2004 – LONDON



All organisations have issues specific to themselves, but some challenges are common to their industry and many will already have been addressed by other organisations in different market sectors.

In September, Kingswood MapMechanics is holding a corporate briefing to promote knowledge sharing and help new and experienced users of geographical information learn from each other and build on previous successes. Key speakers range from those in large corporations such as GSK (Glaxo SmithKline) to consultancy specialists working for large public sector organisations such as Map Analysis (experts in strategic area reviews, equality and diversity impact



measures and pre-Ofsted inspection analyses for the education sector).

Large organisations are often first to push back the frontiers and so this focus on real applications and problems solved demonstrates some of the latest thinking in map-based analysis, routing and browser-based information sharing.

Presentations will show how others (major retailers, sports, education and health organisations, police forces, door-to-door distributors, pharmaceutical companies, bottled water providers etc) have:

- saved money
- saved time
- improved customer service

● increased speed and clarity of communication

Speakers will cover business objectives met and details of how standard software and data have been used or specifically enhanced to meet corporate objectives. In addition to the guest speakers, the MapMechanics team will be on hand to answer any questions you may have and help ensure you are introduced to any other attendees who might be working on projects similar to your own.

To book your place(s), just contact Katy McKenna (katy.mckenna@mapmechanics.com, tel: 020 8568 7000).

DIARY DATES

KINGSWOOD MAPMECHANICS BRIEFINGS, TRAINING AND EXHIBITIONS:

BRIEFINGS

Making the Most of Geographic Data
13 JULY 2004 – BRISTOL – AM

Efficient Routing & Scheduling
13 JULY 2004 – BRISTOL – PM

Corporate Briefing
7 SEPTEMBER 2004 – LONDON (see above)

EXHIBITIONS

GeoSolutions
29–30 September 2004, Birmingham

TRAINING

GeoConcept Standard
21–22 July
18–19 August
22–23 September

GeoConcept Internet Server
25 August

GeoConcept Extension Course
12 August
30 September

TruckStops
7–8 July
4–5 August
8–9 September

GeoConcept Kits
27 July
28 September

TruckStops Extension Course
16 September

FOR MORE DETAILS call 020 8568 7000,
email info@mapmechanics.com,
or look at our web site: www.mapmechanics.com

New Data Catalogue

MapMechanics' new Data Catalogue is much more than just a listing of data products; in its own right it is also a self-contained guide to GIS. It is one of the only printed guides of its kind available on the market, since many companies only offer internet access to product information.

"The catalogue is also available at www.mapmechanics.com," says Mary Short, "but our customers tell us that they find the paper version is often much more convenient as it can be consulted anywhere and is easier to flick through for new ideas."

This edition of the Data Catalogue contains:

- a new Introductory section that leads readers clearly and methodically through some of the key areas of GIS and map data.

- a redesigned Product section, providing a more concise listing for fast access to the information you need. Major changes such as the introduction of new products or significant price reductions are highlighted.
- a new Applications section with case studies showing how organisations have used mapping to make better informed decisions, improve services and increase efficiency.

■ A personal copy of this free guide to digital map data can be obtained by calling 020 8568 7000 or emailing katy.mckenna@mapmechanics.com.



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