

# Unidata Newslines

Unidata Newslines No. 3, February 2006

## Meeting the challenges in 2006

### In this issue ...

we consider the continued evolution of Crossramp and its next generation—Neon

we introduce our new Asian distributor

and we discuss Bluetooth communications with Starlogger



Welcome to the first issue of *Unidata Newslines* for 2006. We hope you have all enjoyed a Christmas break and are now ready to face the challenges of 2006. It will no doubt be an exciting year in the environmental monitoring field with the increasing emphasis on real-time data acquisition, rapid development of communication technology, and more integration of sensors with loggers and communications as part of integrated systems and applications. The recent natural disasters associated with major flooding, tsunamis, and volcanic eruptions in various parts of the world and the increasing pressures and demands for potable water supplies and agriculture place ever increasing requirements for reliable environmental monitoring. Unidata's challenge is to provide modern technology that will meet customer needs in these areas. In many cases this requires close partnerships with distributors and other organisations to provide integrated systems.

As part of Unidata's commitment to distributors and resellers we have started a series of training workshops for Unidata products, the first of which was carried out in Asia in December and is reported in this issue of *Unidata Newslines*.

To continue our expansion in the global environmental monitoring market we are committed to research and development through continual upgrades of our existing flagship products which are in final trial and will be released in early 2006. However, the major focus this year will be on development of the next generation of Crossramp, providing a real-time data acquisition and processing system. More information on the system is provided in this issue and can also be provided by Unidata staff. This new system is scheduled for release in the middle of 2006 and will include some upgrade of the logging terminal. At the same time we will be scoping R&D requirements for other flagship products such as Starflow. Comments on customer requirements should be directed to the Unidata sales team, and included in this edition of *Newslines* there will also be a client feedback form to fill in. Please take the time to complete this survey; your feedback is greatly appreciated.

Finally, we hope to build on the platform we established in 2005, and with the new developments hope to provide you with the technology and products to meet the challenges in 2006. We look forward to working with you as we meet these challenges.

Mark James  
General Manager

## Unidata at the Singapore Environmental Exhibition

Unidata exhibited at the CIA 2005, Watermex & Enviromex Exhibition held at the Suntec Exhibition Centre in Singapore. Attending this prestigious event was part of Unidata's commitment to strengthening our relationships in the Southeast Asia region.

The exhibition is held every two years and this year it attracted 748 companies from 20 countries and about 6000 visitors over its 4 days.

Taking place at the same time was the Asia Waste Management Summit 2005. This conference brought together international experts and participants to discuss waste management technologies and solutions as well as exploring how these solutions can be implemented.

Being part of this wonderful event provided great opportunities to meet and discuss environmental monitoring techniques and projects with many and varied users from throughout this large region. As well as learning about some of the 'tricks' our Asian friends use to tackle the monumental task of monitoring and managing precious resources, this event was also a great networking opportunity. Many experienced 'value adding' integrators and equipment vendors showed much interest in Unidata's range of products. We are confident that this will lead to new and exciting agencies.

Our display showcased a variety of Unidata products that perform well in the field of environmental monitoring. This included our water level instrument, borehole logger, Starflow, and our Starlogger range of data loggers.

Starflow again attracted the biggest interest from customers who were amazed at the power and low cost of this versatile ultrasonic Doppler flowmeter.

Another product which received much interest was our 'Crossramp' and 'XRT' data service provider and field terminal. Real-time data acquisition technologies are certainly the way of the future.





## Distributor training in Kuala Lumpur

As a follow-on from our attendance at the CIA Exhibition in Singapore, Unidata travelled on to Kuala Lumpur to conduct a two-day product training course for a number of our Southeast Asian distributors.

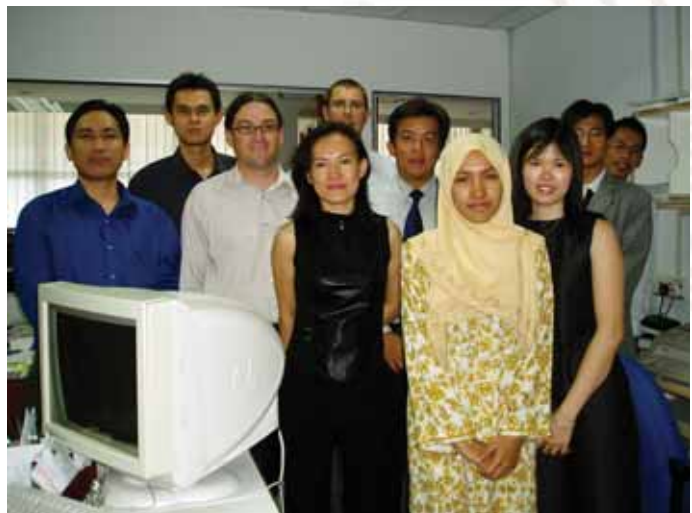
This course was hosted by Surechem Marketing SDN BHD at their well set-up headquarters in Seri Pedalling.

Present were eight technical staff from Surechem, Mr T.S. Seo from Encosys in South Korea, and Mr Dick J. Kanna from Kampung Halaman in Indonesia. Steve Blott and Matthew Wall from Unidata conducted the training.

The focus of the training was 'How to unleash the power of the Unidata logger' with an emphasis on the ProLogger and the Starflow ultrasonic doppler flowmeter instruments. As well as providing enough technical food for thought to our hungry audience, we lightened up the mood with plenty of fun hands-on time. Several hours were dedicated to our new data logger management software Starlog Version 4.0.

All who participated in the training course reported having a great time and felt they had learnt something new and useful about Unidata's products.

We would like to thank our wonderful hosts, Mr Chan and our friends at Surechem Marketing, for their hospitality. We thoroughly enjoyed our visit to your country, and we will cherish many fond memories of our time with you in Malaysia.



## Crossramp history and the future

Redevelopment of the Crossramp system at Unidata is the next step in product development and is driven by customer requirements and changing technology in the marketplace. Conventional techniques required manual data transfer and processing, tasks which in today's world are time consuming and expensive.

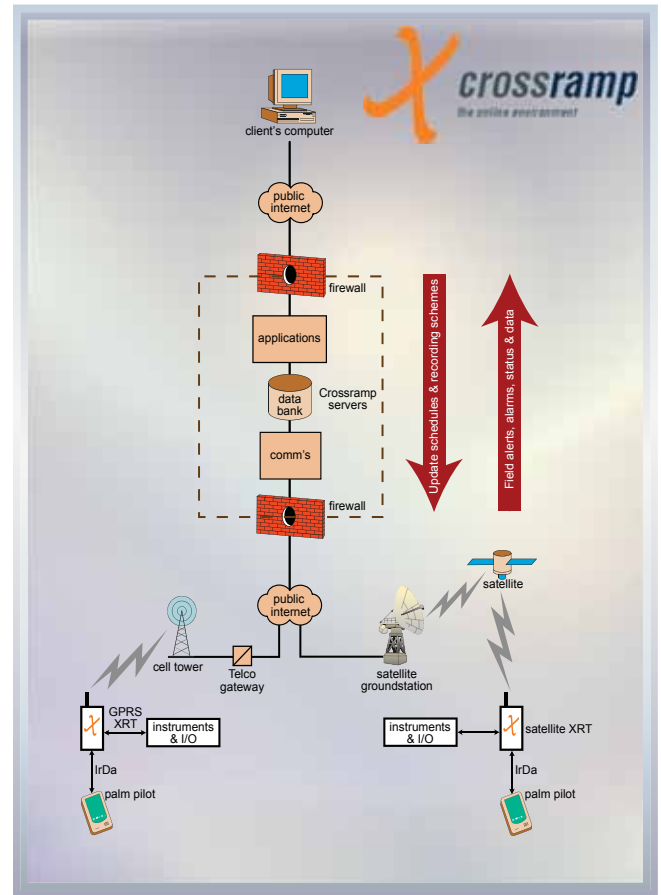
New technologies, such as the internet and digital mobile communications, provided a new way to simplify and automate data acquisition and processing.

This developing technology seeded the initial development of Crossramp, which began in 2000 after collaborative talks between Unidata and the Australian Hydrological Society. The response was positive, and in 2001 the main development began. By 2002 a working system was in place servicing the first trial customer, Alinta Gas based in Western Australia. This system involved field units (XRTs) that connect to data loggers, instruments, or meters. In Alinta's case, the trial application was utility gas metering, and to date 150 units have been deployed as part of the trial.

The field terminals collect the data and regularly forward or 'push' the data to a Crossramp server using GSM/GPRS communications over the internet. This pushing of data occurs on a preprogrammed schedule, but system components can be configured to handle alert and ad hoc reporting conditions when they arise.



The Crossramp server, as well as storing the data record, can be configured to format the data for easy uploading into the client's data processing or billing systems. Crossramp also provides the subscriber with tools to manage and access their remote field data recording assets through the client GUI. Alternatively, Crossramp servers can immediately forward data to the client via email or secure connections.



A typical installation would be an XRT terminal connected to a number of pressure transducers. Every day, at the predetermined schedule, the XRT will be interrogated and send via GPRS to the Crossramp server a 'packet' of information containing the measurement data in raw format. The Crossramp server then extracts the raw data from the packet which is subsequently stored on a secure server until the client retrieves the data. The XRT has been previously set up to signal an alert when the pressure rises over a set point. At this time the Crossramp database has been programmed to send a message to the XRT to increase the reporting frequency until the pressure falls below the set point.

This is typical of how Crossramp is used in its current form. The next generation of Crossramp, currently under the working name of Neon, is due to be launched later this year.

Neon will have all the benefits of Crossramp, but will introduce several new features, including real-time, two-way communications and an improved XRT field unit. We will also introduce satellite communications, improved structure, and the ability to extend functionality and thus integration with other systems. This all makes for a very exciting product.

Please contact your nearest Unidata representative for more information.



## 6542 Hydrostatic water depth and temperature probe

### Specifications

Operating range	1, 2, 5, 10, 20 metres of water
Resolution	0.5 mm @ 1 m 1.0 mm @ 2 m 2.5 mm @ 5 m 5.0 mm @ 10 m 10.0 mm @ 20 m
Operating temp	0 to 60 °C
Temperature error band	± 1.5% fs
Over pressure	1 m – up to 25 times fs 2 m – up to 12 times fs 5 m – up to 5 times fs 10 m – up to 3 times fs 20 m – up to 12 times fs
Power	5 to 18 VDC, 2 mA from logger
Accuracy typically	0.7% fs 1.0% fs worst case
Non-linearity & hysteresis	±0.1% fs BSL
Aux measurement	Water temperature (analog output only)
Analog output	0.2 – 2.55 VDC 3kΩ for temperature (15kΩ reference resistor – provided)
Diameter	25 mm
Length	150 mm long
Weight	350 g
Casing	Marine grade stainless steel with Delrin nose cone.
Vented cable	8.7 mm OD, black polyurethane jacket, braided screen



## 6807D CDMA Data Modem

The 6807D is an 800MHz cellular data modem from Maxon Electronics designed for the mobile network. The 6807D supports the IS-683A protocol and data transmission up to 144 kbps (network dependent) and two-way SMS.

It is designed to withstand extreme temperatures and shock and can be installed anywhere that the CDMA network is supported. This makes the 6807D ideal for remote data telemetry application.

A variety of antenna options is available to suit most installations and signal strengths. The antenna connects to the modem with a SMA connector.

### Specifications

Comms protocol	IS-683A
Modem connection	D-Sub 15 way
Aerial connection	SMA
Input voltage	6V – 36 VDC
Transmit current drain	CDMA Typical 150 mA @ 7VDC
Current at sleep	10 mA
Mechanical dimensions	110 x 61.5 x 25 mm
Weight	110 g

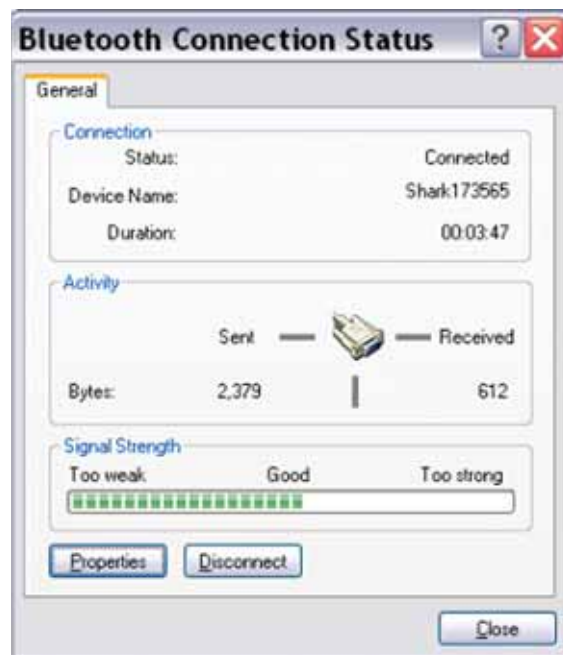
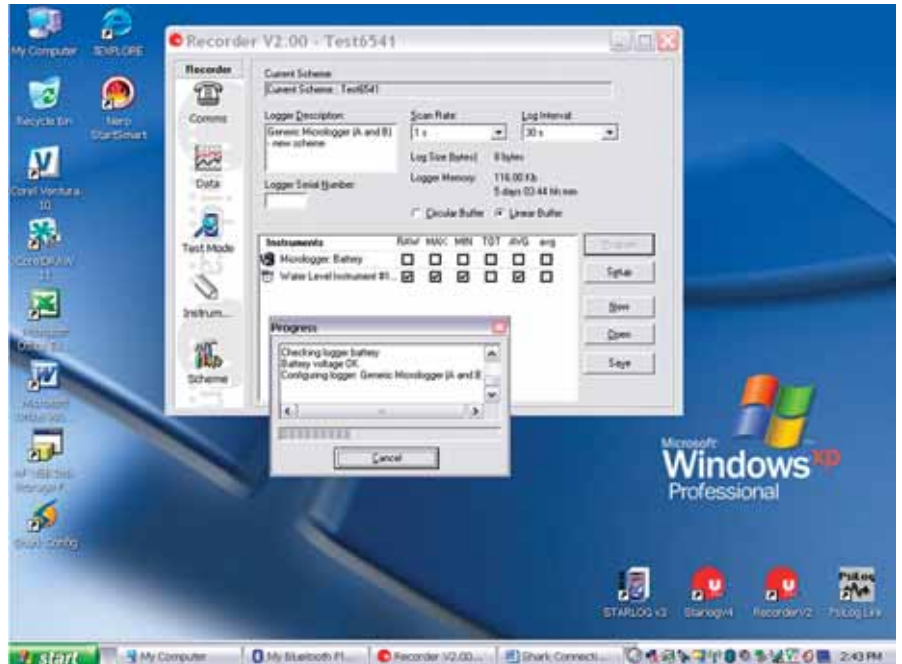
# Wireless Bluetooth communications with Starlog

Unidata engineers have successfully tested Bluetooth communications with Unidata data loggers using Starlog Version 4.0.

A 'Shark II serial port to Bluetooth adapter', available from Stevens Water in the USA was connected to the RS232 serial communications port of a Unidata ProLogger and allowed remote wireless communications with the data logger via the Bluetooth device built into a common notebook computer.

The laptop's Bluetooth device was configured and mapped in the Starlog Version 4.0 data logger management software package. A logger scheme was created and then successfully loaded into the logger to start logging data. A data download was then carried out using the Bluetooth device.

The Shark II provides a low cost wireless solution that can be used with Unidata data loggers to facilitate on-site data transfers without direct cable connections to the data logger. The Shark II is supplied with a power adapter module that can be used to recharge its internal battery; this is further enhanced by a built-in power management facility.



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The device is complemented by a range of antenna configurations that can be used to extend the already generous 100 m range of the standard antenna. Having been designed for indoor or outdoor use, this device is well suited for environmental data acquisition systems such as those commonly being deployed with a Unidata data logger at their heart.

*... the Shark II provides a low cost wireless solution that can be used with Unidata data loggers ...*

If you would like more information about this product, please contact Stevens Water or visit [www.stevenswater.com](http://www.stevenswater.com).

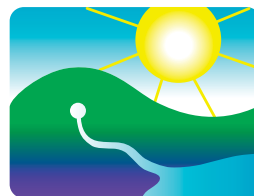
You may also like to contact your nearest Unidata representative for advice on how to configure this device using your Starlog Version 4.0 software.

## Unidata welcomes new Indonesian distributor

Unidata has recently appointed a new distributor in Indonesia, Kampung Halaman.

We welcome Mr Kanna, and look forward to a long and successful business relationship with his company Kampung Halaman.

For any inquiries on Unidata products in this region, please contact: Mr Dick J. Kanna, Sales Executive.



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