KISTERS Australia News

April 2011

Contents

Contents 1
From The GM's Desk 1
Hydstra WDTF Training 2
Hydstra and Water Data Transfer Format 2
Lessons From The Floods 2
Instruments System Redevelopment 3
2011 KISTERS User Group Meetings 4
Hydstra Product News 4
Training Courses 6
Staff News 7
Information 8

From The GM's Desk

By Bill Steen, General Manager, Kisters Pty Ltd

It wasn't so long ago when the topic of the nation was crippling droughts. The words of Dorothea Mackellar "My Country" ring so true *"I love a sunburnt country, a land of sweeping plains, of ragged mountain ranges, of droughts and flooding rains".*

I don't believe there are many states of Australia over the past 4 months that haven't had some sort of natural disaster. Western Australia have experienced both extremes with Perth's hottest summer since records began in 1897 recording a total of 60 days above 30 degrees, breaking last year's record of 56. Yet in the north of WA they experienced extreme flooding.

Then you look towards the east with three-quarters of the state of Queensland was declared a disaster zone with well over 200,000 people being affected. The Department of Environment and Natural Resources in Queensland are probably still out gauging or repairing sites. I'm sure over the coming months as the data is analysed we'll hear of recording breaking results.

In this edition of the newsletter you will find some interesting articles on the new Bureau of Meteorology Water Data Transfer Format [WDTF], including WDTF training. Kisters have already held several courses and more are planned for the next financial year. We will also be holding a basic training course in May. So if you are interested please contact support.

Bill Steen

General Manager
Kisters Pty Ltd

Hydstra WDTF Training

By Todd Lovell, Bureau of Meteorology

The Bureau of Meteorology is working on its next phase for the Australian Water Resources Information system (AWRIS) and a project is underway to ingest data that has been delivered in the Water Data Transfer Format (WDTF) directly into the AWRIS system. In version 10.2 of Hydstra a new program HYWDTF_OUT has been made available to export Hydstra data in WDTF. A large number of Hydstra users are currently using the Hydstra HYBOMEXP program to send data required under the water regulations to the Bureau, however this data is not in the WDTF. There will be a significant number of configuration changes required to send the data in WDTF using this new program.

The Bureau is requesting that organisations do not change to the new program without first making an agreement with them on the timing of the change as the Bureau would like to plan and stage the transition from the current HYBOMEXP data delivery to the new WDTF data delivery. Agreement will enable the Bureau to bring each new WDTF data supply onboard in a sequential manner minimising the chance of rework for providers and the Bureau.

The first training course to assist Hydstra Data Managers to start using the WDTF export program was planned and funded from the Modernisation and Extension program. The course was held in March 2011 and targeted Lead Water Agencies as they will be the first organisations to be ingested in the next phase of AWRIS. Further courses will be held in the 2011/12 financial year for other organisations named in the regulations. The course is aimed at providing Hydstra Data Managers with the skills and knowledge to configure the new program and it is tailored for each organisations data.

If your organisation would like to send a Data Manager to a WDTF training course please notify the Bureau by sending an email to waterdata@bom.gov.au with details of who from your organisation would benefit by attending this course. Receipt of data in the WDTF for all categories required under the Water Regulations is a high priority and the Bureau would also like to remind organisations to start planning projects for the final round of the Modernisation and Extension program.

Hydstra and Water Data Transfer Format

WDTF_OUT Requirements

HYWDTF_OUT will soon be released as a patch to Hydstra 10.03.02 and will be distributed with 10.4 and beyond. It will never be patched back earlier than 10.3.02, so please consider upgrading when you can. The WDTF project has been funded by the NSW Office of Water using BOM funds from the Modernisation and Extension of Hydrologic Monitoring Systems Program. HYWDTF_OUT will export TS, WQ and GW data from Hydstra in the appropriate WDTF formats, as well as sites, gaugings, ratings and sections.

HYBOMEXP will continue to be supported for the indefinite future, and in fact the BOM has requested that users do not start using HYWDTF_OUT until they are requested to change by BOM.

HYWDTF_OUT will not support HCS format, so you will need to continue to run HYBOMEXP to produce HCS format data (flood warning) if you need to send HCS data to BOM.

HYWDTF_OUT is predicated on your data being in good order and condition, as it has some fairly tight validation in a number of areas. We suggest you start running HYGIENE and paying particular attention to the integrity of your ratings system, and the validity of the Lat/Long fields in SITE. HYWDTF_OUT does not use the grid reference fields, only the Lat/Long.

The Bureau have started testing HYWDTF_OUT with a couple of major organisations, and once it has been given the all clear they will announce when it should go into production. It is likely that more workshops will be held next year to introduce more agencies to HYWDTF_OUT. Stand by for further information.

Lessons From The Floods

The recent floods throughout the east coast of Australia raise the issue of disaster recovery (DR) plans for Hydstra (and other essential IT infrastructure). There's nothing like a flood to raise the profile of water resources agencies, and it's always good to be able to continue to provide essential water data to stakeholders even in the midst of disaster.

A well planned disaster recovery plan will take into account the possibility of loss of access to the building, loss of phone and satellite links, even loss of data loggers as they go under or are washed away, as well as the more mundane issues like disk failure, virus infestation, etc.

How would your agency cope if power was off to your main building for a week and everyone was consequently evacuated? It doesn't take water rushing through the foyer for the power to go off - the placement of critical transformers and other infrastructure can mean you lose power well before you gain water. The Department of Environment and Natural Resources in Queensland suffered exactly such a scenario during the recent Queensland floods, and the building was shut down for a week. Because they had a detailed disaster plan in place they were able to move buildings, relocate communications, and have Hydstra back up and running within a few hours. Could you do the same?

Disaster planning is an expensive and detailed process, but a necessary investment. To quote Wikipedia, "*It is estimated that most large companies spend between 2% and 4% of their IT budget on disaster recovery planning, with the aim of avoiding larger losses in the event that the business cannot continue to function due to loss of IT infrastructure and data. Of companies that had a major loss of business data, 43% never reopen, 51% close within two years, and only 6% will survive long-term".*

The minimum steps for Hydstra DR include the following:

- An equivalent set of servers and data at another site
- Frequent replication of all Hydstra data via a replication SAN, RSYNC, ROBOCOPY, or SFFS.
- Consideration of incoming logger data -IP loggers, dialled loggers, SODA and Hydrotel duplication, etc.
- Workspaces for key staff to operate from (or provision of laptops so they can operate from home or a hotel room plus suitable VPN infrastructure)
- Documentation and training on DR procedures
- Testing the DR plan on a regular basis

Wikipedia has a brief discussion of the topic at http://en.wikipedia.org/wiki/Disaster_recovery. Google will find plenty more. There are specialist consultants who can help you prepare a DR plan.

Instruments System Redevelopment

We are planning a major redevelopment of the Hydstra Instruments system later this year. The main design objectives of the new work are as follows:

- The system will be presented to field operators in a site-based framework so a hydrographer can know what instruments were installed at a site and what actions were required of them. A number of tabbed pages will present actions based on the calibrations and questions components of the existing Instruments and HYVISIT systems.
- More metadata will be added to help answer management questions about the holdings of an agency, including how many instruments of a certain type were available, etc. Further classification of instruments will allow questions like 'How many modems do we have in total?' or 'Where are all our Campbell loggers' to be easily answered.
- More financial information is required to provide budgeting, depreciation, purchasing, insurance and other financial decision making
- Documents like photos, manuals, maps, calibration sheets etc can be stored against various aspects of the instrument system and easily retrieved (this component is already complete in 10.03)
- There will be a link from an instrument to the time-series data it collects, and vice versa.
- There will be a connection between check values taken in the field and the associated logger values. These can be subsequently analysed against manufacturers specifications to see if instruments are remaining within tolerance or not.

The design is based on user requirements gathered at the Instruments Workshop hosted by the NSW Office of Water last year, plus additional consultation with NOW. If you have views on how the instruments component of Hydstra should evolve please contact us with your suggestions.

2011 KISTERS User Group Meetings

Canberra - August 24/25

The 2011 Australian User Group meeting will be held in Canberra on August 24 and 25 at the Marque Hotel, 102 Northbourne Avenue, Canberra, www.marquehotels.com, ph: 02 62491411, fx: 02 62496878

Special conference rates will be available for User Group attendees however Parliament will be sitting that week so accommodation in Canberra will be tight. You are advised to book early if you plan to attend. You should mention that you will be attending the Kisters User Group Conference to get the best rates.

The cost of the Canberra conference will be $580 per person, inc GST. Please contact Debbie Cockburn to register early, we will distribute registration forms closer to the time.

The meeting will be for both Hydstra and Wiski users, Wiski users will break out into a separate room after lunch on day 1.

Sacramento - September 12/13

The 2011 US User Group meeting will be held in Sacramento on September 12 and 13 at the Sacramento Hotel, 100 Capitol Mall, Sacramento. More details will follow.

Edinburgh - May 25/25

The 10th International WISKI User Conference will be taking place from the 24th to the 25th of May 2011 in Edinburgh, Scotland. The conference will be held at the RSE Scotland Foundation. The registration form can be found at http://www.kistersnews.com/eu/events/iwuc2011.html . Please contact Ms Jill McLean (Jill.McLean@Kisters.de / +49 241 9671 207) for more information.

Hydstra Product News

Migrating to Hydstra 10.03

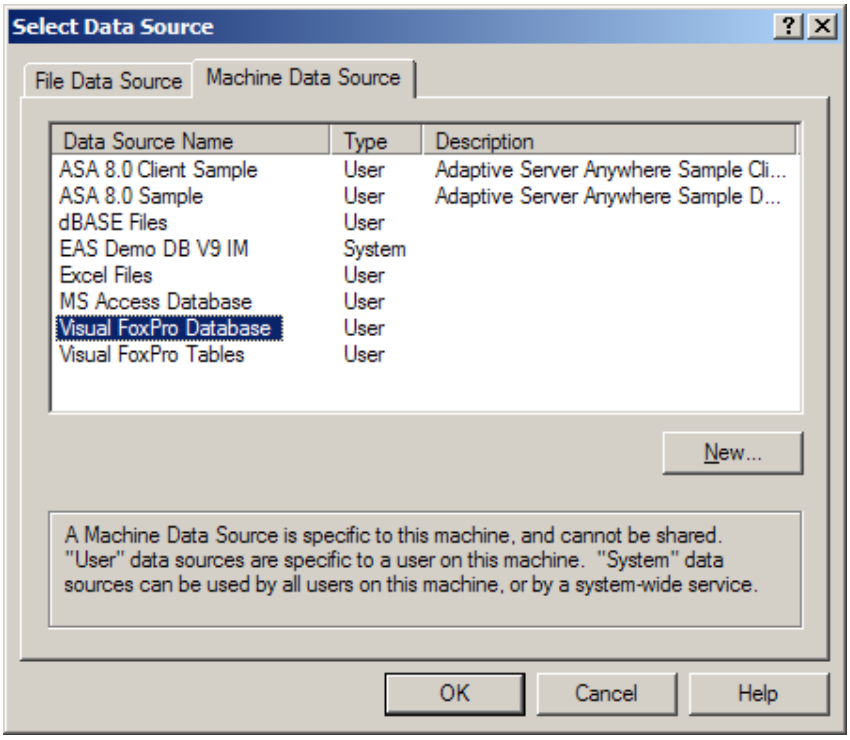
Some users are asking about the benefits of Hydstra 10.03. A couple of dot points might help persuade you to migrate:

- Hydstra 10.3 runs under Windows XP (32 bit) and Windows 7 (32 bit and 64 bit). Hydstra 9 will not run on 64 bit operating systems, and is only partially successful under Windows 7. If you are planning a corporate move to Windows 7 you should start thinking about upgrading to Hydstra 10.03 first.
- Hydstra 10.3 includes HYDLLP, which requires no COM registration to use. A couple of trivial modifications to Perl scripts and you can be free of those annoying registration errors for ever. (Note - for Excel and other users the changes required to use HYDLLP are rather more complex, though we do offer examples of HYDLLP calls from other languages). You can start HYXPLORE with a /NOREGDLL flag to suppress any attempt to register the old DLL.
- A SQL Server version of Hydstra 10.03 is available. This is in beta testing with a number of users right now. The SQL Server version stores all database tables in SQL Server, though time-series data is still kept in Hydstra binary files.
- Hydstra/WEB 10.03 includes a web service which external users can consume for their own purposes if required.
- HYWDTF_OUT will not be available for earlier versions of Hydstra version 10.03.02. In due course (over the next 12 months or so, and only when explicitly requested to do so by the BOM) you will need to start sending WDTF data to the BOM using HYWDTF_OUT.

It is worth noting that Hydstra runs fine in a virtual environment provided sufficient CPU and memory resources are allocated to the task. It also runs well under Citrix and Windows Terminal Services.

Hydstra Version 10 Access Compatibility Issues

Some users have reported problems in version 10.03.02 connecting to Hydstra tables from MSAccess or MSExcel. This may have been due to changes to CDX files which were made in order to make Apollo behave the same as SQL server. Previously users would have used the Visual FoxPro *Tables* Machine Data Source. To reconnect, users will need to use the Visual FoxPro *Database* Machine Data Source.



Old Style Macro Errors

In Hydstra V11 we will be removing all legacy support for old-style macros and will simply abort. You should track down and fix all sources of macro warnings while you can. Generally the process is quite simple - it involves amending INI files, LOCMENUS.XML and possibly entries in the LOCMENUS table itself. Old-style macros were of the form &INIPATH, and they need to be upgraded to the form &HYD-INIPATH. - note the trailing dot is essential.

Hydstra 10.03 Performance

There is one area where Hydstra 10.03 will inevitably be slightly slower than 10.1 and earlier releases, and that involves a change in compiler technology which means all strings are now stored and manipulated in Unicode internally. This significantly increases the size of EXE files and libraries, and also doubles the size of string data being passed around, which will in turn increase the memory footprint of programs. This is just an inevitable result of 'progress' that we couldn't avoid.

Users running SVRRUN who are close to the performance limit of their SVRRUN machine would be well advised to consider either upgrading the SVRRUN machine or put a second server machine onto the job as well. This should only be a concern if it is taking 40 or 50 minutes of processing every hour to process the incoming data from SVRIMP in the last hour.

The advantage of SVRRUN is that you can put as many server machines on to the job as necessary, so in theory you could run a dozen servers if you had tens of thousands of real-time telemetry files coming in every 15 minutes.

Internet Explorer 6 Considered Dangerous

Internet Explorer 6 is a dangerous and obsolete program that nobody in their right mind should be using. Microsoft itself deprecates IE6, and they have provided an interesting web site http://ie6countdown.com/ to show statistics on its use, and to encourage people to move away from it. To quote Microsoft: *"Friends don't let friends use Internet Explorer 6. And neither should acquaintances. Educate others about moving off of Internet Explorer 6"*. From 2012 we will be withdrawing support for IE6 in Hydstra/Web.

Hydstra Web Service Trial

The NSW Office of Water is hosting a trial web service which uses SOAP to pass calls based on Hydstra's HYDLLP JSonCall technology. You can find more information about the service at http://realtimedata.water.nsw.gov.au/cgi/webhyd.pl?soapws. You may need documentation on the JSOnCall

capabilities of HYDLLP to fully exploit the service - please contact us for more information.

We provide example code for VBA and Perl to consume the web service, other languages should be fairly easy once you master the JSonCall syntax.

Hydstra users running 10.3 with the right Perl datasource and a few other bits that can be supplied by KISTERS can also access the data directly from their Hydstra systems. This means that it may not be necessary for them to have copies of NSW data on their systems.

Please do not overload the service, it is provided courtesy of NOW as a public trial. It should not be used to download large volumes of data.

Proposed Benchmark Redevelopment

The Northern Territory Department of Natural Resources, Environment, The Arts and Sport (NRETAS) have proposed some enhancements to the benchmark component of Hydstra (the BENCH table), and are bidding for funding in round 5 of the BOM's Modernisation and Extension of Hydrological Monitoring Systems Program. The draft proposals have been distributed with this newsletter. If you have an interest in this topic please contact Aidan Smith at NRETAS in the first instance. His phone number is 08 8999 4522.

Training Courses

WDTF Training Courses

We recently completed the first round of Water Data Transfer Format (WDTF) training on behalf of the Bureau of Meteorology. Over four days we provided training to eight agencies with two people from each agency in attendance.

We expect that we will be running more of these courses in the new financial year. Please register your interested in attending a course directly with the BOM via an email to waterdata@bom.gov.au with details of who from your organisation would benefit by attending this course.

Isn't this WDTF exciting?

If only we had more WDTF in our lives!

Introduction to Hydstra Course

We plan to run an Introduction to Hydstra course on May 3 and 4. Please register your interest via an email to support@hydstra.com.

Staff News

Happy Holidays - Not!

Kisters was smitten with considerable misfortune over the summer break. Peter Heweston was hospitalised before Christmas with a Deep Vein Thrombosis (DVT) and has been advised not to travel overseas for at least six months. Debbie Cockburn had a serious accident when her horse slipped and fell on her. She suffered a broken pelvis, but after several months is now much recovered and back at work. Alain Remont fell off a ladder and badly injured his knee. Fortunately everyone is on the mend.

New Staff Member Dr Christian Michl

We welcome Christian Michl to our Canberra office. Christian has a PhD in geography from the Rhenisch Friedrich-Wilhelms University of Bonn, Germany. In his masters thesis he used the finite element model MODFLOW and GIS analysis to simulate groundwater flow in the sediments of the alluvial aquifer of the River Sieg. From 1995 till 1999 Chris worked as lecturer and supervisor of several undergraduate and postgraduate students and research projects in Germany and South Africa at the Friedrich-Schiller University of Jena, Germany. Here he finished his PhD in 1999 working in two head water catchments in theThueringian forest testing different process-based modelling approaches.

From 1999 onwards Chris was team leader engineering applications in hydrology and deputy head engineering applications at the Federal Waterways Engineering and Research Institute, Germany. Here he was acting as IT project manager for all hydrological related software projects (major projects were the WISKI 5.x and 6.x development) within the Federal Waterways and Shipping Administration and coordinated all academic activities for the IT division of the German Federal Waterways Engineering and Research Institute.

Chris joined Kisters on the 1st February 2011. He is based in the Kisters Pty Canberra office where his main activities will be to assist Uwe Hass in several WISKI / SODA installation and ongoing support of Australian WISKI clients. Chris is also hoping to bring more soccer skills to Australia, we wish him luck :-)

Email: christian.michl@kisters.com.au

Phone: +61 2 6288-2288

New Staff Member Callum Ramage

We welcome Callum Ramage to our Hobart office. Callum is presently completing his Bachelor of Science part time, and is busy learning the joys of Delphi and Hydstra from Trevor Magnusson.

Email: Callum.ramage@kisters.com.au

Phone: +61 3 6224 7686

Sanette Latsky Relocates to Jervis Bay

Sanette has moved to Jervis Bay following her husband's transfer there. She will continue to work with KISTERS via telecommuting on support and the groundwater redevelopment.

Information

This newsletter is published by Kisters Pty Ltd and edited by Peter Heweston

Homepage: http://www.kisters.com.au

All support and accounts questions should be directed to support@hydstra.com.

All personal Kisters email addresses in Australia are of the form firstname.lastname@kisters.com.au, but all general emails should be addressed to support@hydstra.com.

Canberra

Unit 4A, 24 Mahony Court
Weston ACT 2611

PO Box 3476
Weston Creek ACT 2611, Australia

Phone +61 2 6288 2302, Fax +61 2 6288 9061,
Email support@hydstra.com

Hobart

Level 4, 2 Kirksway Place,
Battery Point, Tas 7004

GPO Box 1390
Hobart, Tas. 7001

Phone +61 3 6224 8252, Fax +61 3 6224 8414

Sacramento

7777 Greenback Lane, suite 209
Citrus Heights, CA 95610
Phone +1 916 723 1441, Fax: +1 916 723 1626

Aachen

Charlottenburger Allee 5
52068 Aachen, Nordrhein-Westfalen, Germany
Phone +49 241 9671-0, Fax +49 241 9671-555

France

RHEA SAS
Green Park
11, rue du Vieux Pont
92000 Nanterre, France
Phone +33 1 30 71 62 54

Italy

Temistocle Li Vigni, General Manager
GEOSPHERA Hi-Tech Supplies
85 Via Panoramica
Ercolano (NA) 80056 - ITALY
http://www.geosphera.com
Phone +39 081 777 9541,
Fax +39 081 739 2596
Mobile +39 335 601 3998

Spain

C / Gabilondo Nº15 Principal
E-47007 Valladolid, Spain
Phone +34 983-228134, Fax +34 983-276876

Shanghai

Fushan Road 450, 10F
Pudong New Area
200122 Shanghai
China

iQuest (NZ) Ltd

PO Box 15 169
Dinsdale
Hamilton 3243 New Zealand

Core Facilities Building
Waikato Innovation Park
Ruakura Lane
Hamilton 3214 New Zealand

Phone +64 7 857 0812 (DDI), Fax +64 7 857 0811,
Mobile +64 21 489 617