KISTERS Australia News

March 2012

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From The GM's Desk

By Bill Steen, General Manager, Kisters Pty Ltd

Welcome to 2012 which happens to be the 25th Anniversary of both the HYDSTRA & WISKI products.

The start to 2012 has been hectic with the annual international KISTERS meetings being held in Aachen Germany. As per previous years this provides a great opportunity to hear firsthand about the growth of the company, the new and developing technologies and a chance to meet new colleagues and catch up with fellow KISTERS employees.

For me the meeting also provides insight into the global water industry, especially with presentations covering nearly every continent and major water agencies from around the globe utilising KISTERS products. Every country has its unique requirements but fundamentally the manner in which water and water related data is managed is universal. One interesting presentation revolved around the introduction of IP addressable data loggers pushing data to FTP sites. In some cases agencies reliant on this new technology had moved away from the traditional telemetry methods with the concept that they received data on a regular time step. However after a few years several of these agencies reinstated the traditional telemetry methods to enable them to have more control in terms of retrieving data, especially during a major event.

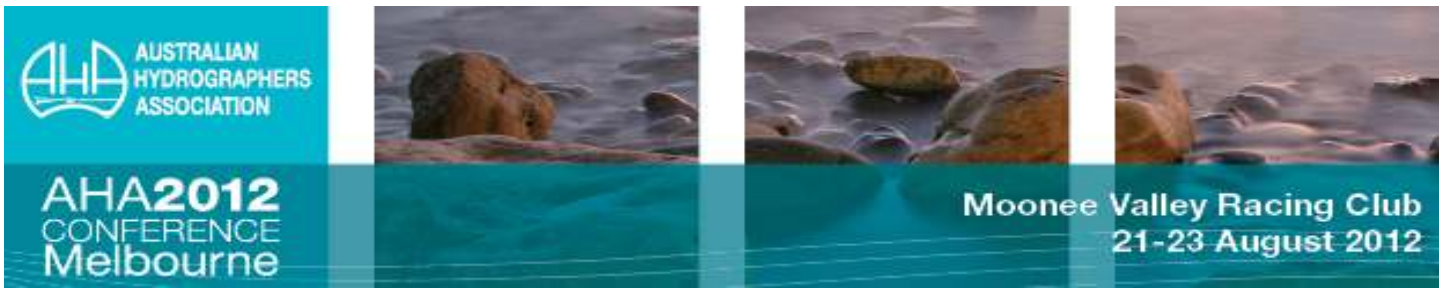
On the same topic KISTERS were recently commissioned to undertake a study on the timeliness of real-time data arriving into Hydstra using IP telemetry over the Telstra 3G network, an article including the results appears in this newsletter.

The beginning of 2012 also sees a new face at Kisters Pty Ltd and we wish to welcome Vicky Isaac. Some of KISTERS Australian users will already know Vicky as she was formerly employed by the New South Wales Office of Water. More information on Vicky's experience appears in this newsletter.

Although it's only March we'd like to make sure you have all pencilled in this year's User Group meeting to be held in Melbourne on Tuesday 21st August. Registration details will soon be released. Hope to see you there.

Bill Steen
General Manager
Kisters Pty Ltd

AHA 2012 Conference



The Hydrographers Association Conference is held every two years. It is a unique opportunity for hydrographers and industry suppliers to network, learn from each other and promote their products to water industry representatives from all over Australia and the Asia Pacific Region. More specifically, we encourage and anticipate participation from members, leading State and Federal water agencies, water utility providers, hydro power generators, private industry groups and individuals.

The 2012 Conference is to be held at the Moonee Valley Racing Club in Melbourne, Victoria from the 21st to the 24th of August. Introductory drinks are on the evening of the 21st with the main conference on 22nd and 23rd, and an optional field trip on the 24th.

All practitioners with an interest in the profession of Hydrography are welcome to attend and the Committee urges each member of the AHA to find the time to come to Melbourne in August 2012.

2012 KISTERS User Group

Moonee Valley - Melbourne - August 21

The 2012 Australian KISTERS User Group meeting will be held in Melbourne at the Moonee Valley Racing Club on August 21, the day preceding the AHA Conference. Reserve the date in your diary, we will provide registration details later.

25 Years of Hydstra

In October 1987 the NSW Department of Water Resources (now the NSW Office of Water) signed a contract with the newly formed HYDSYS Pty Ltd (then comprised solely of Peter Heweston and Trevor Magnusson) to port the fledgling suite of HYDSYS programs from an IBM PC to a Fujitsu mainframe. From little things do big things grow!

Old timers are invited to submit brief presentations or photo shows to the User Group meeting on their memories of the early days of HYDSYS and Hydstra. An exhibit of early photos and Hydstra memorabilia will be on display.

Wiski User Group

International WISKI User Conference | 13th - 14th of June 2012 | Koblenz | Germany

We want to celebrate 25 years of WISKI at the WISKI User Conference with you, from the 13th to the 14th of June 2012 in Koblenz, Germany!

For this celebration we want to bring together all our users. Therefore we are inviting the international and German WISKI community to join the WISKI User Conference 2012. The conference will be bi-lingual and simultaneously interpreted.

Through the conference we hope to encourage further exchange between participants. Please contribute towards this. It would be great if you would take the opportunity and demonstrate your use of WISKI, technical solutions, or clever details you have made using the software. This could be done through a presentation or as contribution to workshop.

We will provide additional information about the event, the agenda, the registration etc. soon by Email and on www.kistersnews.eu. We are looking forward to welcoming you to this event!

Greetings from the KISTERS WISKI Team!

The Hosts and WISKI

We are delighted that our first customer in Germany will be the host of the next year's conference. Many thanks to the German Federal Institute of Hydrology (BfG). In addition to the BfG, we would also like to extend our thanks to the Global Runoff Data Centre (GRDC) who will also be supporting the conference.

25 years ago, a project together with the BfG led to the inception of WISKI. Following a period of rapid growth, it has established itself as a standard product in the field of water resources management.

WISKI is in daily use within the BfG, as well as many areas of the Water and Shipping Administration (WSV). Example areas of application include specialist checks of the gauge data for the federal waterways; processing of the data for the national level archive and for contributions to the German Hydrological Yearbook. Additionally the data management of the Nuclear Radiation Network for the federal rivers.

The World Runoff Data Centre (GRDC) was set up at the BfG in 1988. Under the auspices of the World Meteorological Organisation (WMO), the GRDC pushes for the expansion of a worldwide database of flow data from all countries and significant catchment areas for the support of studies about climate change and the trans-border management of water resources. In this area, KISTERS has been working more closely with the GRDC.

Thanks a lot to the BfG and GRDC for supporting this event.

More about the BfG
More about the GRDC

KISTERS Workshops in Aachen

In January a number of KISTERS Pty Ltd staff travelled to Aachen to participate in a series of regular workshops. Three streams were held:

- Tethys - Technical - Peter Heweston, Trevor Magnusson and Callum Ramage attended.
- Partners Week - Marketing - Bill Steen
- Consultants Workshop - Wiski Consultants - Uwe Hass and Chris Michl.

The weather started off brisk and went downhill quickly. By the end of the workshops the daytime temperatures were struggling to reach -6, and overnight minima were in the order of -12 and worse. For Australians coming from midsummer it was a shock!

Peter Heweston celebrated his 65th birthday on the first day of the Tethys workshop, and a magnificent cake was duly forthcoming. Over the three weeks of meetings there were many opportunities for technical and social exchanges with KISTERS staff from around the world. Thanks again to KISTERS in Aachen for a well organised and enjoyable workshop.

A snowy KISTERS Office in Aachen

Malcolm Barr (iQuest) and Bill Steen enjoying traditional German cuisine

WDTF Data Transfers

As agencies are gradually mastering HYWDTF_OUT, WDTF data is starting to flow to the BOM at an increasing rate. Kisters Pty Ltd have run a series of training courses in Canberra, Sydney, Melbourne and Perth to train agencies in the configuration and management of HYWDTF_OUT, and BOM are sharpening their data ingest tools in preparation for the ongoing flood of data arriving at their FTP site.

As the BOM starts to take up WDTF data in earnest a few issues have emerged with HYWDTF_OUT, and a round of patching was carried out in December. Agencies who are not patched up to December are encouraged to download the latest 10.03.02 patch from the FTP site and apply it.

In conjunction with NSW Office of Water we are also testing HYWDTF_IN which imports a limited subset of WDTF data into Hydstra. At present it doesn't import metadata (sites, ratings, water quality etc) but can import time-series data. However there are a number of issues around using WDTF as an inter-agency transfer mechanism that need to be reviewed before you consider using it as a generic inter-agency transfer format:

- WDTF was designed with a BOM regulations framework in mind, and all data needs to be associated with a regulation. Only data that is mentioned in one of the regulations can be transferred.
- Only a limited number of variables can be transferred via WDTF, as defined in the BOM spreadsheet which is distributed in Hydstra as *hybomexp.SchemaControlLists.xls* in MISCPATH.
- Data can only be interchanged in the nominated WDTF units associated with each regulation.
- WDTF does not support subvariables.
- WDTF does not support datasources. (some limited combination of subvariables and datasources can be encoded into the four Status values (*validated, combined, provisionalBest, provisional*)
- Only 5 quality codes are available (*quality-A, quality-B, quality-C, quality-E, quality-F*)

While WDTF might be suitable for exchanging some limited time-series data its verbosity makes for very large files, and XML makes for slow importers.

Other Transfer Mechanisms

A number of other data transfer mechanisms are already in widespread use throughout the Hydstra community.

- Many agencies transfer raw telemetry from SODA or Hydrotel directly to multiple destinations via FTP. This gives the most immediate way of exchanging telemetry data.
- Agencies transfer data via HYIMPEXP. While this is fraught with problems, it can be made to work using HYTRAN and perhaps some Perl and batch skills. The problem is that potentially every variable, quality, code value etc might need to be mapped on the way in. HYTRAN is your friend, but don’t expect an easy ride.
- A recently developed program HYGENEXP allows you to send time-series data in CSV format using techniques similar to HYWDTF_OUT. HYGENEXP supports a flexible architecture of pluggable Perl formatters, so it is fairly easy to extend it to export data in the format of your choice.
- Data is being exchanged between Hydstra and Wiski using HYZRXP_OUT and HYZRXP_IN.
- Hydstra/WEB users can publish their data via the Hydstra HYDLLL web service. Anyone on the world can consume the data and use it as they please.

Data Delivery with IP Loggers

Peter Heweston

We recently were involved in a project to look at the timeliness of real-time data arriving into Hydstra. The client had deployed a large number of loggers using IP telemetry over the Telstra 3G network. The loggers used a variety of 3G modems to deliver data. They were generally configured to log every 15 minutes and deliver every hour.

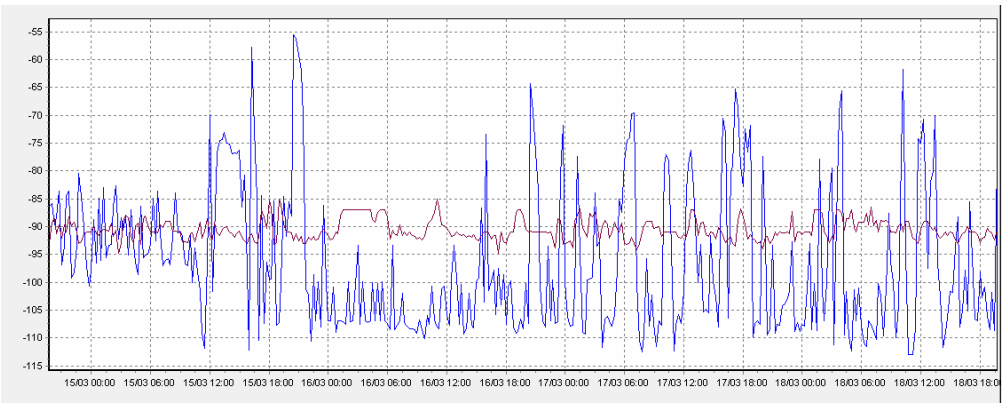
The client had noted that in some circumstances the timeliness of the data wasn't as expected, sometimes taking 3 hours or more for information to arrive. We implemented detailed logging of data arrival and

processing times through Hydstra, and some interesting results were discovered.

It seems that many of the sites were in areas of marginal 3G reception. The IP loggers were transmitting their data to Hydrotel, and on examination of the Hydrotel logs it became apparent that of some 530 telemetry sites reporting water level or dam level about 50% had an average data delay of more than 90 minutes, and 10% had average delays of more than 2 hours. Only 30% have an average delay of less than 65 minutes. These figures were across different logger and modem technologies.

The currently accepted explanation of these delays is that the sites were drifting in and out of 3G reception from time to time. There are many factors that affect 3G reception. According to the Optus web site: *A number of factors may affect coverage including location, demand on the network and use of external antenna.* According to the Telstra web site: *Geographic features which may block or inhibit coverage could include formations such as hills and mountains or even trees*. Other web sites suggest that humidity and precipitation can also affect coverage.

The following plot shows the average 15 minute signal strength of two 3G providers at a field location. A directional aerial may well improve the blue provider to become more reliable, but you can see why data timeliness might not be ideal at present.



The interesting point is that eventually the data always gets through. There was no actual loss of data ever, just a sometimes considerable delay before it arrived. Organisations planning to use 3G for their communications might bear in mind the proposed usage of the data. For long term data collection, IP over 3G is fine and reliable if it works at all. For flood warning or operational purposes perhaps you might need to confirm that the site can deliver data in a sufficiently timely manner.

Automated Data Processing

Damian Skinner

In our constant drive to achieve more with fewer resources, Hydrographers and Data Managers increasingly find themselves having to process more data, validated to a higher standard, in less time with less staff. This article discusses a couple of recent projects that we've worked on that exploit Hydstra's automation capabilities to make it possible to efficiently process large volumes of field and telemetry data.

These systems will never replace the need for trained data specialists in reviewing data, but they can lighten the processing load on staff.

Automated Field Data Processing at WA Department of Water

Glen Terlick has recently delivered a system for efficiently processing field data to the WA Department of Water in a project sponsored by the Bureau of Meteorology. This system streamlines the process of importing, calibrating and validating data and preparing it for archive. Processing is controlled by an Access Database which contains information for each site/variable gathered during field visits. If a raw data file passes all routine 'checks' and successfully completes all routine processes then it is delivered to the destination data source, ready to be manually reviewed and archived. If any step in the process fails, then automated processing for that site/variable will stop.

The process starts in the field where a Hydrographer fills in a form in an Access database. The form records the following information:

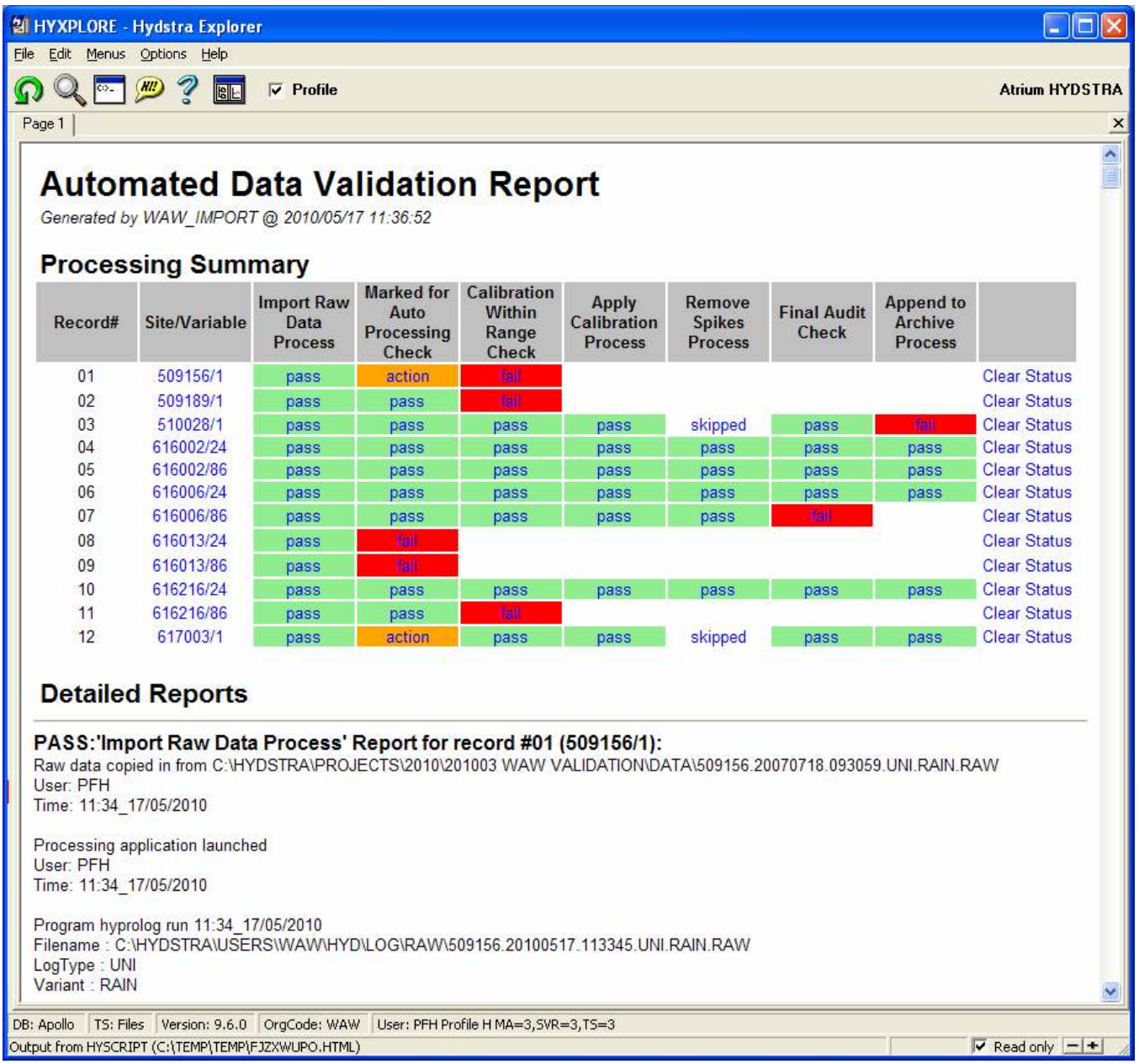
- Differences in the logger clock from the actual time. This makes it possible to perform time corrections.

- Differences in the values recorded on the logger against the actual values. This makes it possible to perform value corrections.
- Whether there were any spurious rainfall events recorded in the time-series, such as a tipping bucket calibration test
- The rainfall calibration factor that was used on the previous data for this site
- The rainfall calibration factor (or total) to apply to the newly collected data
- The HYGENLOG logger/variant to be used to process data from the logger
- Free-text comments

At various stages on the form the Hydrographer has the opportunity to flag that a particular piece of data should not be automatically processed, so that it can be manually reviewed.

Back at the office the Hydrographer can then use a Hydstra HYSCRIPT program called WAW_IMPORT to automatically process the data they have collected. This process uses the information contained in the Access database to process raw logger files. The automated processing sequence consists of the following steps. If any step fails then processing for that site/variable stops so that any issues can be reviewed manually. The process will store its report for that site/variable then move on to the next raw file.

1. First, import raw data using HYGENLOG. A copy of the raw data is preserved in a sub-variable, so that it can be compared to data that has been automatically adjusted.
2. If the import succeeds, then we check to see that the Hydrographer wanted this site/variable to be automatically processed
3. If the site/variable is marked for auto processing, then we check whether the required time and value calibrations are within the expected range, based on historical calibrations.
4. If the time/value calibrations are within expected limits, then we apply those calibrations using the HYFILER CALIBRATE function
5. If the calibrations were successfully applied, then we attempt to identify and remove spikes in the data. HYAUDIT is used to identify spikes using the "Rate of Change Limit" test and HYDLL is used to re-write the time-series without these suspect points. Any spike that has been removed is reported.
6. If spikes were removed successfully, then we do a "Final Audit" to see whether the resulting time-series is within historical limits. This processing step can use any of the tests available in HYAUDIT.
7. If new data passes the final audit, then we "Append it to a copy of the Archive". The combined data is written to a temporary data source, where it is ready for manual archiving. The archive is not automatically updated.
8. The Hydrographer can review the results of the automated processing in an HTML report, which provides a quick summary as well as full details of each processing step. Each cell within the HTML report is hyperlinked to the report detail.



HYXPLORE - Hydstra Explorer

File Edit Menus Options Help

Profile

Atrium HYDSTRA

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Automated Data Validation Report

Generated by WAW_IMPORT @ 2010/05/17 11:36:52

Processing Summary

Record#	Site/Variable	Import Raw Data Process	Marked for Auto Processing Check	Calibration Within Range Check	Apply Calibration Process	Remove Spikes Process	Final Audit Check	Append to Archive Process	
01	509156/1	pass	action	fail					Clear Status
02	509189/1	pass	pass	fail					Clear Status
03	510028/1	pass	pass	pass	pass	skipped	pass	fail	Clear Status
04	616002/24	pass	pass	pass	pass	pass	pass	pass	Clear Status
05	616002/86	pass	pass	pass	pass	pass	pass	pass	Clear Status
06	616006/24	pass	pass	pass	pass	pass	pass	pass	Clear Status
07	616006/86	pass	pass	pass	pass	pass	fail		Clear Status
08	616013/24	pass	fail						Clear Status
09	616013/86	pass	fail						Clear Status
10	616216/24	pass	pass	pass	pass	pass	pass	pass	Clear Status
11	616216/86	pass	pass	fail					Clear Status
12	617003/1	pass	action	pass	pass	skipped	pass	pass	Clear Status

Detailed Reports

PASS:'Import Raw Data Process' Report for record #01 (509156/1):

Raw data copied in from C:\HYDSTRA\PROJECTS\2010\201003 WAW VALIDATION\DATA\509156.20070718.093059.UNI.RAIN.RAW
User: PFH
Time: 11:34_17/05/2010

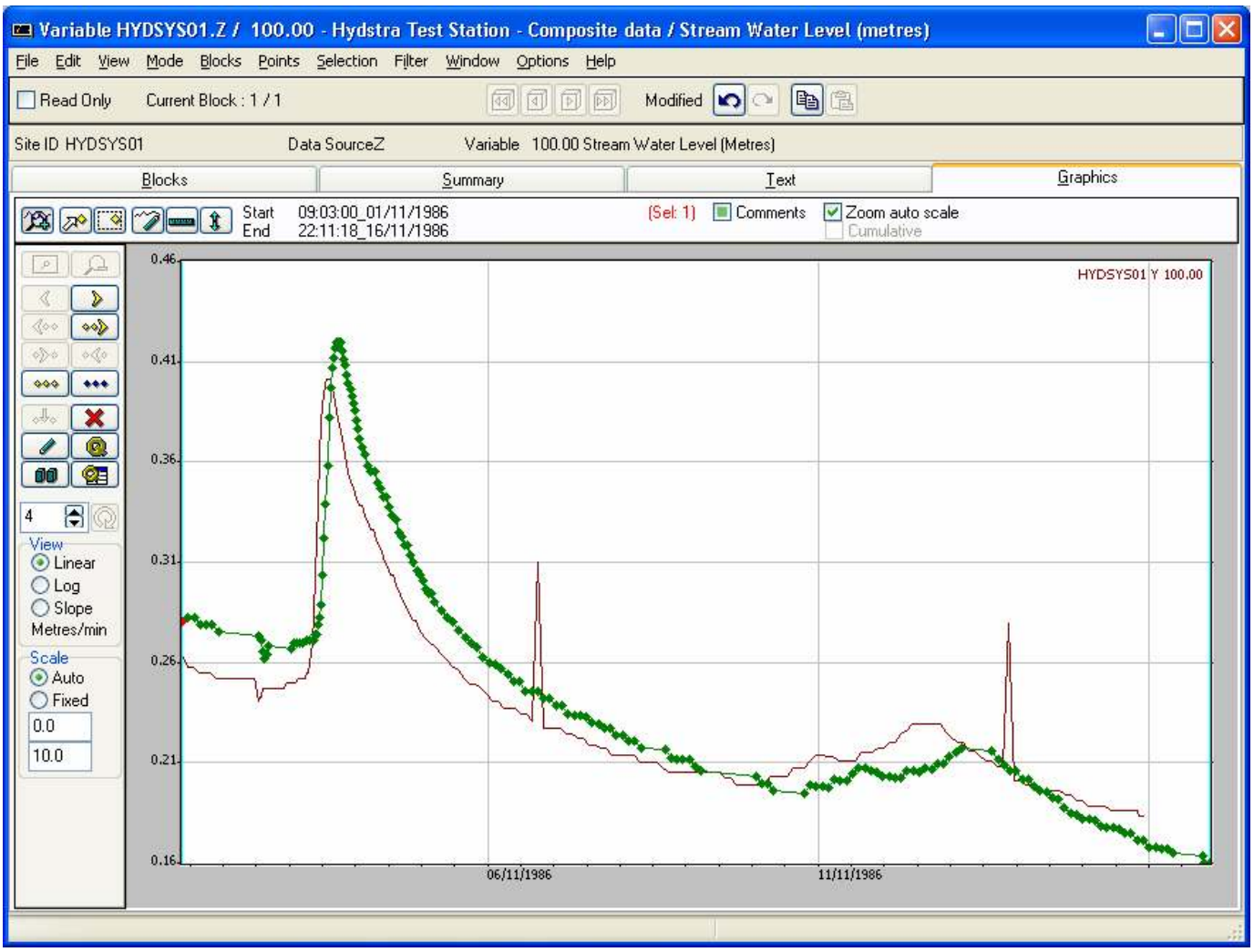
Processing application launched
User: PFH
Time: 11:34_17/05/2010

Program hyprolog run 11:34_17/05/2010
Filename : C:\HYDSTRA\USERS\WAW\HYD\LOG\RAW\509156.20100517.113345.UNI.RAIN.RAW
LogType : UNI
Variant : RAIN

DB: Apollo | TS: Files | Version: 9.6.0 | OrgCode: WAW | User: PFH Profile H MA=3,SVR=3,TS=3

Output from HYSCRIPT (C:\TEMP\TEMP\FJZXWUPO.HTML) Read only

9. The Hydrographer can launch the Data Manager's Workbench directly from the HTML report to view the processed data against the raw data, which has been preserved in a sub-variable, or separate Data Source.



The routine has been successfully run on a multitude of variables including Groundwater Level, Electrical Conductivity, Water Temperature, Barometric Pressure, Air Temperature, Stage and Rainfall.

Please contact Glen Terlick (Glen.Terlick@watercorporation.com.au) or Damian Skinner (damian.skinner@kisters.com.au) for more information on this project.

Automated Telemetry Data Processing at NSW Office of Water

The NSW Office of Water processes tens of thousands of telemetry files each day, with a requirement to deliver quality assured near real-time data to users. With these volumes of data it is impossible to review the data manually, so the NSW Office of Water has set up an automated data validation process triggered to run as soon as data is imported by SVRIMP. This process can identify potential data errors and assign appropriate quality codes within minutes of the data being imported.

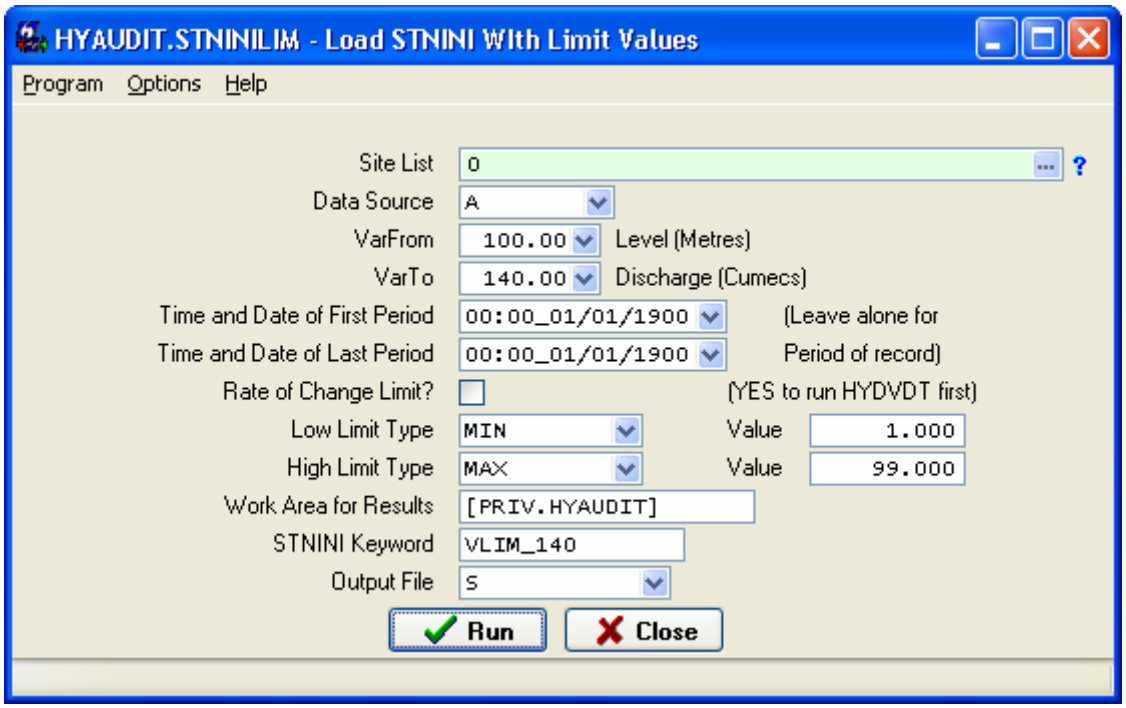
The validation process uses the following HYAUDIT tests to identify potential data problems:

- Missing data, caused by acquisition problems, using the 'Data Current' test
- Data above or below the expected range, using the 'Data Within Range' test
- 'Spikes' caused by faulty sensors, using the 'Rate of Change Limit' test
- 'Flat lines', caused by water levels falling below the range of the sensor, using the 'Flat Line' test

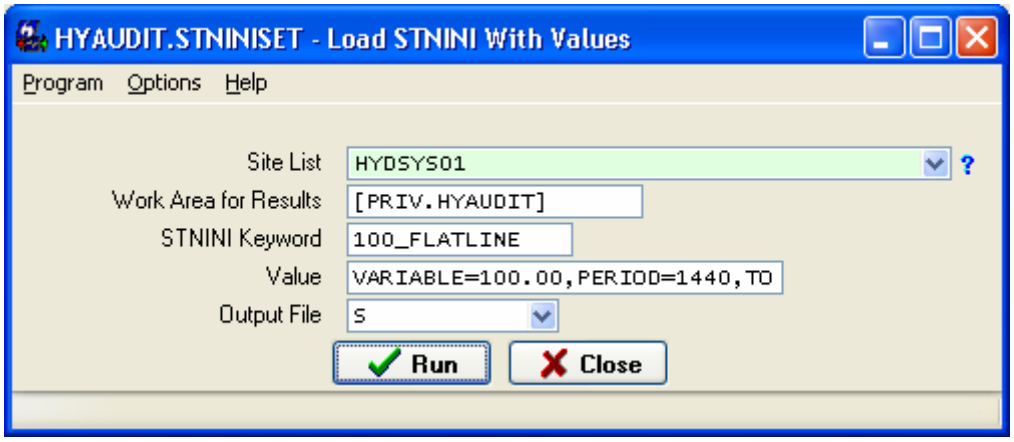
The first challenge is to configure HYAUDIT for each Site/Variable that will be processed, as the acceptable limits will differ between sites. Hydstra includes two tools to help you configure these tests in HYAUDIT based on historic data.

HYAUDIT.STNINILIM is used to configure the "Data Within Range" and "Rate of Change Limit" tests for a given Site/Variable. This program scans the historical data to identify the 'normal' range of data, or the 'normal' rate of change of the data. It can then extract limits based on the maximum or minimum values, or a percentage of the max/min, or a percentile of the max/min over time. These limits are then written to a STNINI keyword, for reference by the HYAUDIT test. The quality of the STNINI values is only as good as the

quality of your time-series data, so you need to make sure your Archive is squeaky clean.



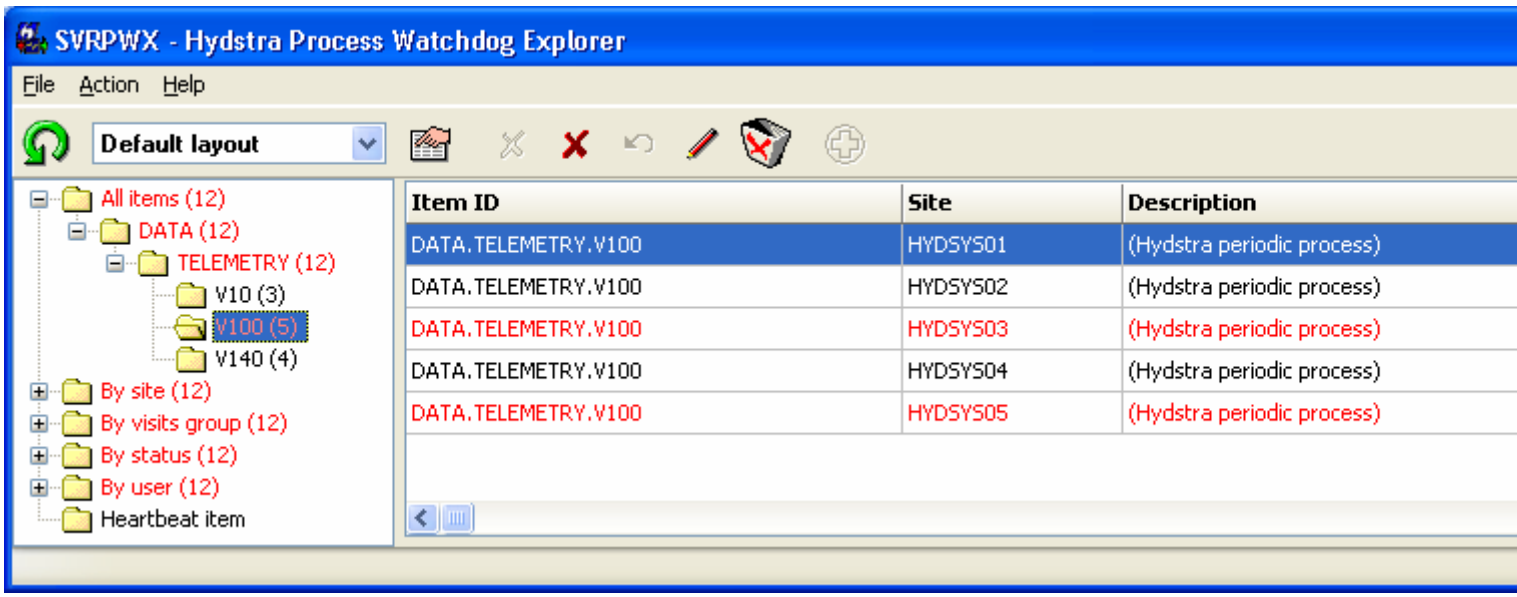
HYAUDIT.STNINISET is used to configure the “Flat Line” test. This program can set the Flat Line limits to a STNINI keyword for many sites at once.



Once you have configured HYAUDIT for each Site/Variable, the sequence of processing is as follows:

1. The process is initiated by SVRIMP when new data is imported into Hydstra. Triggers are defined in the SVRTRIG and SVRACT tables, which are consulted by SVRIMP when new data is written. These predefined triggers create a new validation task to be executed by SVRRUN.
2. SVRRUN executes a Hydstra HYSCRIPT job, which does the following:
    a. Runs HYAUDIT to identify potential data problems
    b. Runs HYTRAN to assign all new data points with a ‘good’ quality code
    c. Runs HYFILER POINTMOD to mark all ‘failed’ data points with a ‘bad’ quality code

The end result is an efficient process that automatically assigns quality codes on incoming data based on historic limits. Telemetry data can then be provided to end-users within minutes of it being imported into Hydstra. This process can be integrated with SVRFIDO to provide a short-list of failures that need to be reviewed manually:



Please contact Damian Skinner (damian.skinner@kisters.com.au) for more information on this project.

Hydstra Product News

Next Version Schedule

We are planning to release Hydstra 10.4 in the second quarter of 2012. It will include a significantly enhanced Hydstra/GW system, as well as a major rework of the Instruments component. Apart from these two areas the rest of the changes are incremental and are unlikely to have major impacts on users or cause significant upgrade problems.

Hydstra Patch Regime

Hydstra builds have a four-component name, along the line of 10.03.02.20110708. This means *version* 10, *release* 03, *patch* 02, *build* 20110708. Systems sharing the same version and release are guaranteed to be database compatible, systems sharing the same patch are guaranteed to be binary exe compatible.

We attempt to rebuild the patch every week, which means the build date will change. As part of a new build the entire test harness is run across the new build to ensure that the system is still healthy.

As a general rule any patches made during the week will be consolidated into the weekly build. Only in exceptional circumstances will patches be sent immediately to users, the usual procedure will be for them to wait for the next build.

You can access the patches in one of two ways:

- From the FTP site ftp.kisters.net/hydstra/releases
- From the web site http://kna.kisters.net/hydstra/

In either case you will need to contact us for the user login and password. Please include your HYACCESS.INI in your email.

The current patch is *hydstra.10.03.02.20111205.update.zip*.

Patching Hydstra/WEB

After a couple of minor disasters recently we have realised that you should not apply a patch blindly to the version of Hydstra running Hydstra/WEB outside the firewall. We are actively working on our release mechanisms to improve the management of the web code, but until we give the all clear please do not patch the version of Hydstra running on the web server without consulting Denby Angus first. Take care if you have Super Flexible File Synchroniser (SFFS) running that you don't automatically synchronise \hyd\sys and below as part of a scheduled sync.

The End of Hydstra V9 is Nigh?

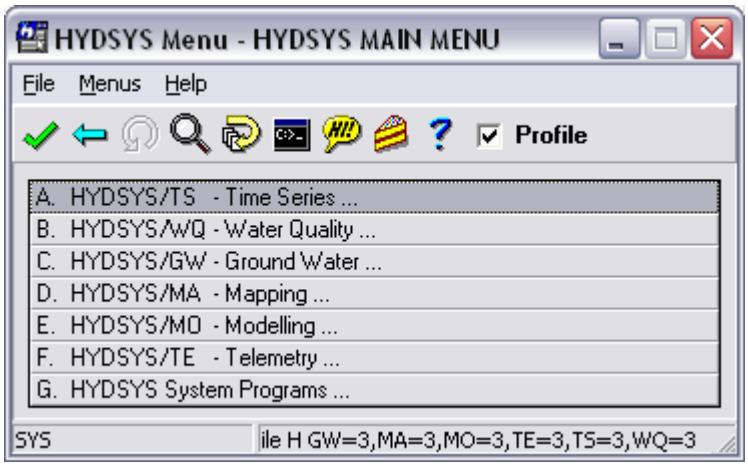
If you are running Hydstra V9 on a laptop you should be taking active steps to upgrade to V10 while you can do it at your leisure. If your laptop breaks and you need to buy a new one it will almost certainly be running 64

bit Windows 7, and Hydstra V9 will not run on a 64 bit system. You will be forced to upgrade just when you already have enough problems on your plate!

Large agencies should be planning their upgrade to V10 as a matter of some urgency.

Or Maybe It Isn't?

After having recently acquired a shiny new Dell Vostro 3750 running 64 bit Windows 7 I realized that I couldn't run earlier versions of Hydstra because they weren't 64 bit compatible. After discussion with colleagues in the office I installed VMWare Player (Google for it) and created a virtual machine running XP. Lo and behold my version 7 Hydstra from 2001 sprang into life. Remember HYMENU?



While VMWare is free, you do need a valid Windows XP licence to perform this trick. However most people have spare XP install CDs lying around from PCs long dead, so it's not much of a burden. The virtual machine can see the hard drive of the host machine, but only as a mapped drive, so all the drive letters in HYCONFIG might have to change.

Starting Hydstra under 64 bit Windows

If you do have a 64 bit Windows PC you will need to ensure that the /NOREGLL flag is applied when starting HYXPLORE, as even an attempt at DLL registration may bring Hydstra down:

```
c:\hydstra\prod\hyd\sys\run\hyxplore.exe /noregll
```

It's worth noting that In Hydstra 10.4 the registration defaults will be reversed - /NOREGDLL will be the default and you will need /REGDLL if you want registration of the legacy HYDLL.

Copying Tables Between Foxpro and SQL Server

As more agencies start to use SQL Server to hold their database tables it's worth remembering that HYCONFIG has a keyword ARCHIVE2 in the [System] section. If you are running a SQL version of Hydstra you can set the ARCHIVE2 keyword to point to a HYCONFIG that uses Foxpro to store the database tables

```
ARCHIVE2=c:\hydstra\prod\hyd\hyconfig.fox
```

Now you can use HYDBUTIL to copy tables between SQL Server and Foxpro using ARCHIVE2 in the same way you would specify a work area::

```
HYDBUTIL COPY * [ARCHIVE2] S
```

Of course it works the other way too - start with a Foxpro system and use the ARCHIVE2 keyword to point to a SQL HYCONFIG:

```
ARCHIVE2=c:\hydstra\prod\hyd\hyconfig.sql
```

For a complete discussion of how to migrate your data to SQL Server read the Help File topic *Loading Hydstra FoxPro Data into SQL Server*. There is a significant Hydstra licence fee associated with migrating to SQL Server.

FTP speed throttling in HYWDTF_OUT

We have added the capability of throttling the bandwidth required by HYWDTF_OUT in its FTP transfers to the BOM. If you download a Hydstra 10.03.02 patch after 9 March 2012 you will be able to add an additional keyword to the FTP section:

```
;set optional megabits per second FTP throttle, 0 for no throttling.
ftp throttle=0.1
```

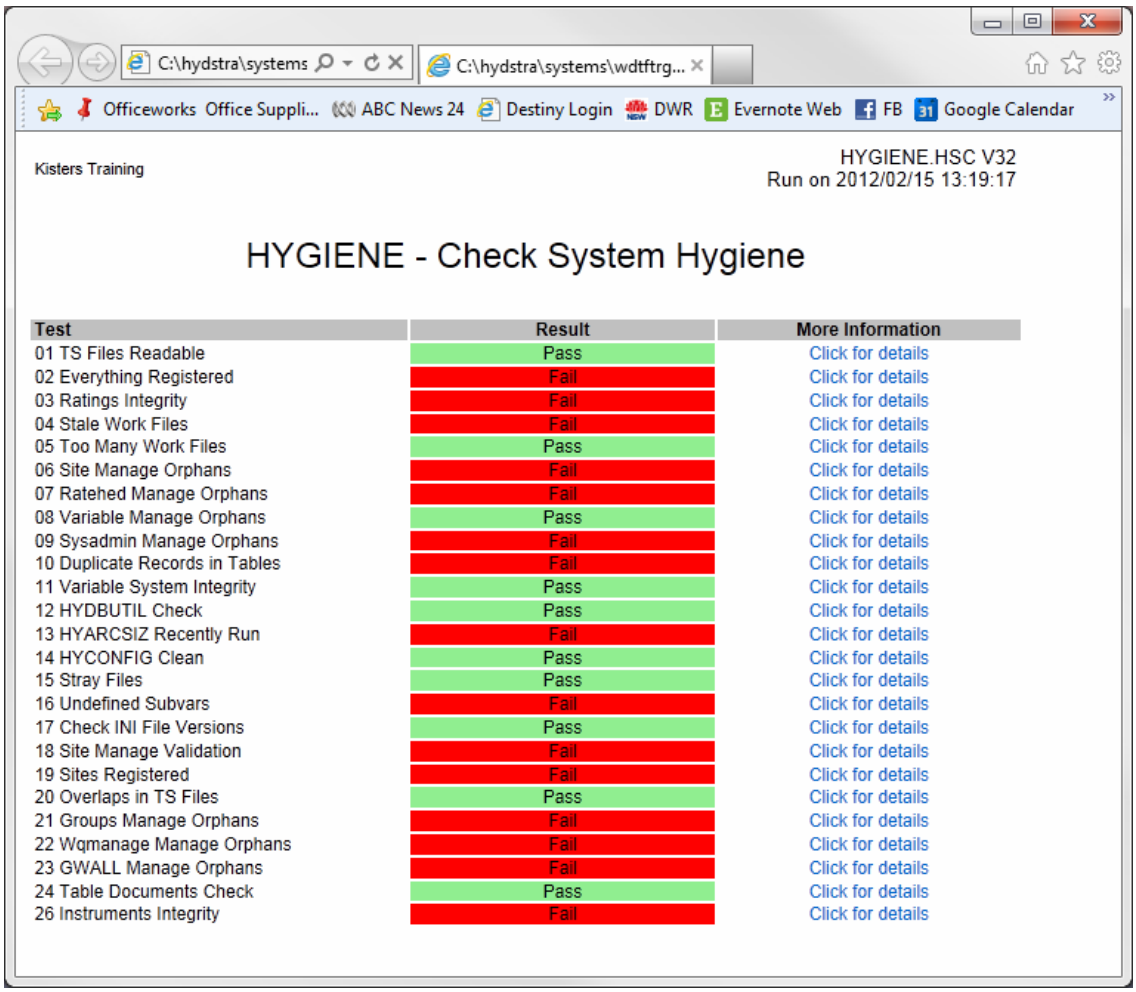
This would restrict the bandwidth used to 0.1 megabits per second. At least one major client has found that data transfers to BOM were unreliable with the FTP link dropping out frequently until the bandwidth was reduced.

Achieving a Green HYGIENE

Those of you who have recently attended the WDTF training course will have spent a good deal of time looking at HYGIENE issues. We issue the challenge to all Hydstra system administrators to send us a screen dump of an all green HYGIENE and we will credit you in the Newsletter. The following points might be of assistance in cleaning up problems - and doctoring your HYGIENE output in a text editor does not constitute success!

- 01 TS Files Readable (search for ERROR)
  - HYFILER REINDEX
  - Fix variables and qualities in HYDMWB or HYTRAN
  - Recover files from backup
  - HYFILER RECOVER (will lose some data)
- 02 Everything Registered
  - Register sites
  - Fix dud codes, variables, qualities
  - Remove delivered data for HYDSYS01 and other stray sites
- 03 Ratings Integrity
  - Get rid of dupes
  - Fix non-matching equations
  - Look at backwards discharge in HYMANGE or HYRATAB
  - Fix INI file to omit variables that genuinely can go backwards
- 04 Stale Work Files
  - Clean em up!
  - Amend INI file to ignore datasource
- 05 Too Many Work Files
  - Clean em up!
- Orphans
  - Add a parent record
  - Kill the child in HYMANAGE
- Duplicates
  - HYDBUTIL DUPLICATES
  - Don’t delete in HYMANAGE, you will lose both copies!!
- 11 Variable System Integrity
  - Use tables to change units and dimensions, not factors
  - Use UNITCODE where possible instead of factors
- 12 HYDBUTIL Check
  - Fix codes etc
- 13 HYARCSIZ Recently Run
  - Run it!
- 14 HYCONFIG Clean
  - Deal with DSHFT – make it 100 in HYCONFIG.INI
- 15 Stray Files
  - Delete them
  - Move .BAK files to the right place

- 16 Undefined Subvars
  - Register subvars in VARSUB table
  - Set site 0 for defaults
- 17 Check INI File Versions
  - Update INI file using MISCPATH instructions
- 18 Site Manage Validation
  - Allocate every SITE to a PERSON in PASSWD
  - HYDBUTIL REPLACE to set a default
  - Fix coded data or code lists
  - Allow blank codes
  - Remove code requirement in SYSADMIN manage
- 19 Sites Registered
  - Register sites
  - Remove dud data
- 20 Overlaps in TS Files
  - Fix them
- 24 Table Documents Check
  - Register sites
  - Remove stray documents
  - (don’t care)
- 26 Instruments Integrity
  - Add services and calibrations as required
  - Fix instruments at two sites or no sites
  - Remove dud instruments that don’t belong to you



Kisters Training

HYGIENE.HSC V32
Run on 2012/02/15 13:19:17

HYGIENE - Check System Hygiene

Test	Result	More Information
01 TS Files Readable	Pass	Click for details
02 Everything Registered	Fail	Click for details
03 Ratings Integrity	Fail	Click for details
04 Stale Work Files	Fail	Click for details
05 Too Many Work Files	Pass	Click for details
06 Site Manage Orphans	Fail	Click for details
07 Ratehed Manage Orphans	Fail	Click for details
08 Variable Manage Orphans	Pass	Click for details
09 Sysadmin Manage Orphans	Fail	Click for details
10 Duplicate Records in Tables	Fail	Click for details
11 Variable System Integrity	Pass	Click for details
12 HYDBUTIL Check	Pass	Click for details
13 HYARCSIZ Recently Run	Fail	Click for details
14 HYCONFIG Clean	Pass	Click for details
15 Stray Files	Pass	Click for details
16 Undefined Subvars	Fail	Click for details
17 Check INI File Versions	Pass	Click for details
18 Site Manage Validation	Fail	Click for details
19 Sites Registered	Fail	Click for details
20 Overlaps in TS Files	Pass	Click for details
21 Groups Manage Orphans	Fail	Click for details
22 Wqmanage Manage Orphans	Fail	Click for details
23 GWALL Manage Orphans	Fail	Click for details
24 Table Documents Check	Pass	Click for details
26 Instruments Integrity	Fail	Click for details

A very non-green HYGIENE!

Training Courses

Hydstra/WEB Administration Course

We propose to run a three day Hydstra/WEB administrator's course on June 12-14 at our office in Canberra. The course will cost $2250 per person including GST. In order to attend this course you need to meet the following criteria:

- You must be an experienced Hydstra administrator
- You must have purchased or be evaluating the Hydstra/WEB module
- You must be familiar with HYBATCH
- Knowledge of HTML, XML, CSS and Perl would be helpful

Topics we propose to cover include:

- Web portal architecture
- Configuring IIS6 and IIS7
- Configuring WEBHYD.INI
- Customising styles (WEBHYD.CSS)
- Customising with [orgcode]WEBORG.PL
- Rebuilding the portal (WEBBUILD.BAT)
- Publishing sites documents (WEBUPDATEDOCS.BAT)
- Publishing latest values (WEBLATEST.BAT)
- Publishing prepared products (HYBATCH.INI, WEBBATCH.INI)

- Generating map marker widgets (WEBWIDGETS.BAT)
- Overview map (WEBCURRENT.BAT)
- Publishing events images (WEBEVENTS.BAT)
- Publishing latest values/plots via mobile devices
- Web server performance (XML caching, low bandwidth option, proxy server caching, IIS caching/FastCGI)
- File synchronisation with SFFS (also WEBSFFS.BAT)
- Web portal maintenance (HYXPLORE menu, WEBCLEAN.BAT, WEBPROCESSES.BAT, WEBCHECK.BAT, cache clearing, reboots)
- Debugging and troubleshooting (browser debugging, WEBOK.BAT)
- Web activity (WEBLOG.PL, CPU load)
- Coming developments

Please bring copies of your Hydstra system and the details required to establish a remote connection to your Production and Web servers. We will provide wireless internet in the training room.

Please contact us via support@kisters.com.au if you wish to attend.

Hydstra Administration and Server Course

We propose to run a three day course on administering Hydstra, particularly in the context of large organisations running SVRIMP and SVRRUN. The course will cost $2250 per person including GST. It will be run at the Kisters Pty Ltd office in Canberra on July 3, 4 and 5. The intended target is Hydstra system administrators, and previous experience with Hydstra will be essential.

Topics we propose to cover include:

- HYCONFIG and HYMULTI
- Installing and patching
- Testing new releases
- Training off USB
- Configuring datasources
- HYFTP and HYMAILER
- Batch programming
- Automation and AUTOJOB
- Shutting down Hydstra
- Problem solving and debugging
- Backup and recovery, HYCLONE
- Bulk data changes - HYDBPERL, HYDBUTIL, HYFILER, HYTRAN
- HYTSMIRROR for copying TS files around
- SVRIMP, SVRRUN and SVRFIDO

Please contact us via support@kisters.com.au if you wish to attend.

Available Courses

We are happy to put on training courses on any aspect of Hydstra provided there are sufficient people interested in attending. Please contact us at support@kisters.com.au with expressions of interest for any training requirements you have. We can provide training at your office or here in Canberra. Training in Canberra is based on a per-person per-day cost, provided we have sufficient people attending. Training at your office will be charged our standard consulting rates per day for the trainer, plus a preparation day, plus travel and accommodation at cost.

Courses we can offer include:

- Basic Hydstra

- Advanced Hydstra
- Administering Hydstra
- Administering Hydstra/WEB
- Hydstra Modelling with MODSYN
- Hydstra/SVR Server
- Hydstra/WEB administration
- Ratings and Gaugings
- HYWDTF_OUT

Please contact us via support@kisters.com.au if you wish to attend.

Staff News

We're happy to introduce Mrs Vicky Isaac to our Hobart [Australia] office. Vicky joined KISTERS on the 12th Feb 2012. Vicky has a Bachelor of Applied Science (Mathematics) – majoring in Computer Science and Operations Research from the University of Technology Sydney. She has been working in the IT industry since 1990 – starting as VAX/VMS mainframe computer operator. After a number of years in software application development she completed a Diploma of Applied Science at the University of Queensland in the natural resource area in order to pursue a career developing and supporting environmental software especially in relation to GIS products. From 2002-2011 Vicky worked within NSW's public service sector (Department of Land and Water Conservation, Department of Natural Resources, Office of Water) in a variety of IT roles supporting natural resource management. Some of her major projects included the development of a groundwater licence assessment application with integrated GIS software, a wetlands assessment application also with integrated GIS software and a state wide GIS tool that integrated the departmental spatial and a-spatial data sets within one reporting mechanism. More recently she was the system administrator for the state's Groundwater and Water Quality databases and oversaw the projects to replace these systems with Hydstra/GW and KiWQM.

Vicky's contact details are:

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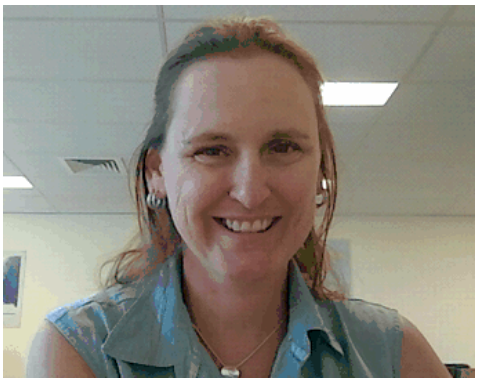

Vicky Isaac

Information

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

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