

dataPOWER 2010:

Where we are and where we are going

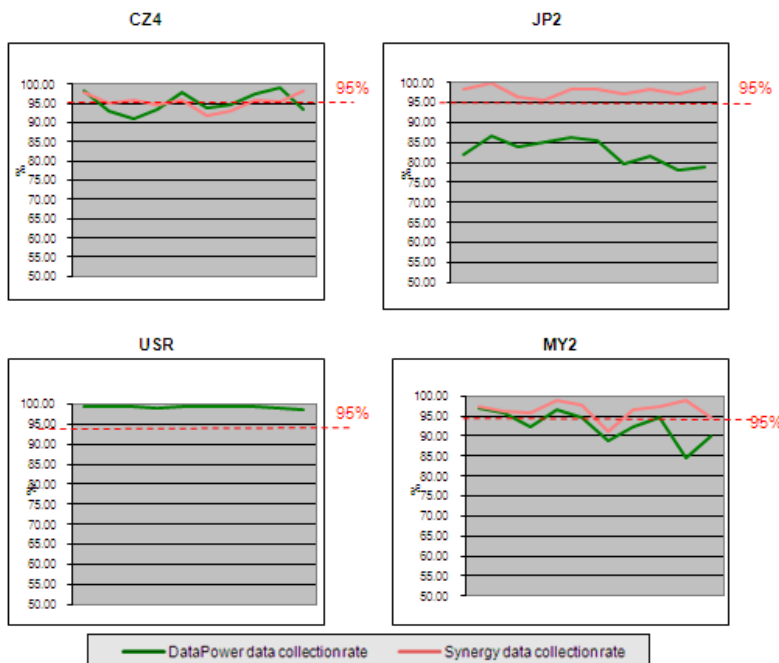
Roughly one year ago, the first article about dataPOWER deployment was published in “We Are ON IT”. Presented here, is an update of what has been accomplished since then and what the plans are for the upcoming year.

Progress in two key prerequisites for dataPOWER success will be discussed; data collection and performance. In addition, updates will be provided for two major implementation projects and the most important indicator will be shown - dataPOWER usage trends over the past 12 months. Lastly, we will share the plans for the upcoming year.

Data collection improvement

The first prerequisite condition for dataPOWER to be successful is to have a sufficient amount of data loaded to the databases – this is simply a must. A data set that is regularly evaluated is probe (wafer sort) data. Our goal is to achieve at least 95% on a consistent basis. Probe data is collected from consolidated probe areas OSPI, MYD and newly Calamba and also in many local probe areas such as Gresham, ZR, AIZU, CZ4, ISMF and others. Great success was accomplished during 2009 when 13 various projects were completed and resulted in overall probe data collection improved from less than 70% to more than 90%.

Probe data collection ww 25-35 / 2010

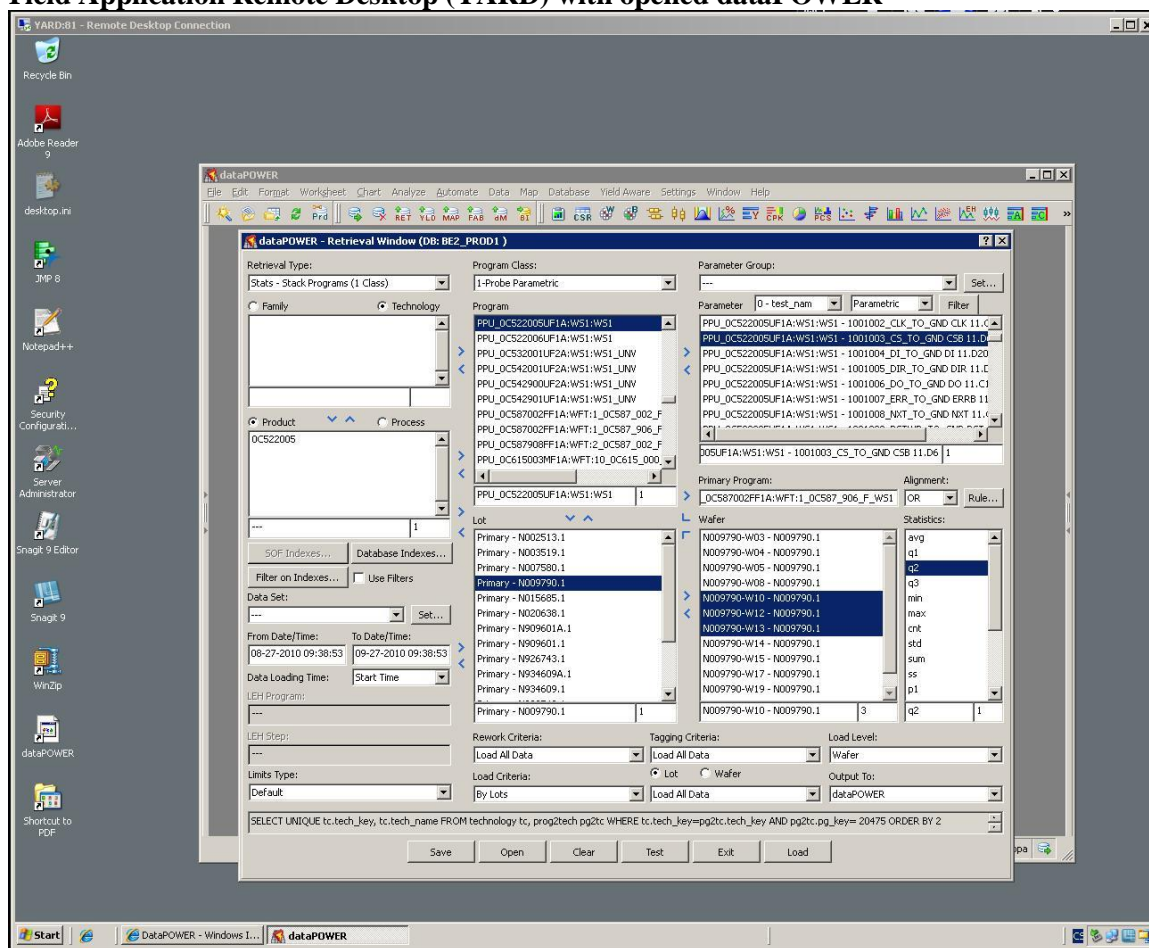


In 2010, probe data collection continued to improve to a level between 90-95% by regular monitoring and fixing data collection failures. There are some differences in collection rates for different originating Fabs. For example, Gresham has constantly almost 100%, ISMF and CZ4 around 95% and AIZU is currently getting only 80 – 85%. Data for Aizu is currently impacted by several issues in OSPI. The issues are identified and currently being fixed so we believe we achieve >95% soon.

Performance Improvement

The second prerequisite for dataPOWER to be successful is good system performance. In order to improve performance, a project was initiated and named “YARD” (Yield Applications Remote Desktop). This project removed dataPOWER performance dependencies from requirements of other enterprise systems. Users will login to YARD via remote access to servers located in data center in Colorado. It also allows improves performance by avoiding the need to transfer huge amounts of data from the data center to users’s PC. The latest tests are very promising and show up to 50% faster operations on large data sets. In addition, YARD will contain latest versions of dataPOWER client with new functionalities, such as enhanced scripting, and will also have latest versions of JMP and MS Office for end users as they work to improve yields.

Yield Application Remote Desktop (YARD) with opened dataPOWER



YARD user acceptance testing is in progress with multiple FE Mfg sites participating and will be available to Gresham's users as a pilot in October. It will then be rolled out to the other Mfg sites starting in November.

dataPOWER Implementation projects in 2010

Two major implementation projects are scheduled to be completed in 2010;

- dataPOWER for Fab2 (Oudenaarde) & Fab10 (Pocatello)
- dataPOWER for Back End Mfg & BU's

The goal of both projects is to make dataPOWER available for new groups of users.

dataPOWER for Fab2 (Oudenaarde) & Fab10 (Pocatello)

Implementation of dataPOWER in both sites is completed. They have already had databases setup, data collection implemented from both Fabs and from the Calamba Test facility, basic user training has been performed and dataPOWER clients have been released. We are now in the adoption phase of the project which includes activities such as development of scripts that will automate a selected set of frequently performed operations, follow up training classes and extensive support so the systems become robust as quickly as possible. The project will be concluded with the retirement of Firms, which is the predecessor of dataPOWER and was extensively used in former AMI sites. Completion is scheduled in December 2010.

Users in Oudenaarde and Pocatello will have the most advanced dataPOWER capabilities that have been deployed to date. Features such as PSA will allow spatial correlation to be performed between scribeline test structures and Probe/Wafer Sort using built in functionality of dataPOWER. We can say that this implementation has set the bar for new standards for all other sites to be brought up to.

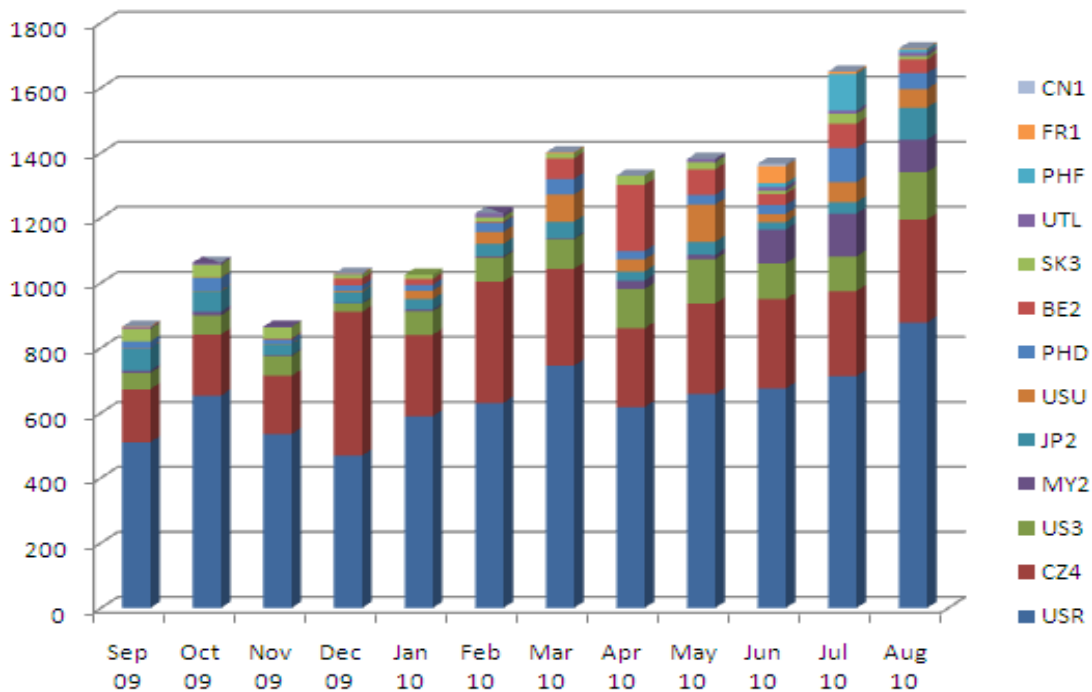
dataPOWER for Back End Mfg & BU's

Until now, dataPOWER projects have targeted users from Front End manufacturing sites so current deployment schema is build accordingly; dataPOWER is available for Fabs – This project is the first to target users from Back End manufacturing sites (Seremban, OSPI, Calamba and Leshan) and also users from the Business Units. The schema will be one where all Final Test and Probe data is loaded into one dataPOWER database called BEBU. In the first phase we are focused on Final Test data and it should be available in November 2010 and will be deployed within the YARD environment in order to take advantage of performance improvements.

dataPOWER Usage Trend

The top indicator to show if dataPOWER projects are successful is the usage of the dataPOWER system. This key success factor and Data Collection Rates are reported on monthly basis to the CIO and his staff.

Usage of dataPOWER has doubled in the past 12 months. This is an outcome of many efforts that included new implementation projects, training, improvement of data collection rates, retirement of legacy systems and setting up of improved support processes.



The even better news is that we expect even higher usage in upcoming months due to planned implementation for Back End Mfg & Business Units and further retirement of legacy systems including Firms and Synergy DEI in AIZU. This increased usage further leverages our investment in the activity to modernize ON Semi's yield improvement and product analysis capabilities.

Objectives for the upcoming year

Over the past two years, the dataPOWER efforts we were focused on building a solid infrastructure which provides good data collection rates and in consolidation of dataPOWER clients. In 2010, we plan to complete two major implementation projects and will improve performance of the dataPOWER system.

In the upcoming year, we will again have no shortage of activities. We will continue efforts to incrementally improve data collection and support activities. In addition, we will turn our attention toward the most diligent user group in the company, which is Gresham. A project is being planned now called Gresham Currency Standardization and will allow Gresham users to use the advanced capabilities available in the latest versions of the software. We will also implement loading of new data sets – for example Defect data. Along with these activities we need to continue providing trainings to all user groups to ensure their knowledge of the tools capabilities are utilized to the highest possible degree.

In closing, we would like to thank all who participated on dataPOWER activities over the last year. The appreciation of your efforts is explicitly expressed by higher and higher usage of dataPOWER. Great teamwork across multiple regions and functional groups has

been our strongest asset. We have more work ahead of us and will continue to provide engineers with the tools they need to improve yield, reduce scrap and improve quality.

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