



# Oasis Portal Streamlines Project Management

## ABOUT QUALCOMM

For 25 years, Qualcomm ideas and innovations have driven the global transformation of wireless communications. The world leader in 3G and next-generation mobile technologies, Qualcomm is connecting millions of wireless device users to the information, entertainment and people that matter the most through its many products and solutions, particularly its semiconductor chipsets.

Qualcomm chips are the core component of many wireless-enabled devices such as smartphones, tablets, e-readers and a host of other devices emerging from the convergence of mobile communications and consumer electronics. Qualcomm is a fabless manufacturer, which means it focuses on the design and development of the semiconductor chipsets while outsourcing the manufacturing processes to vendors known as fabs.

## CASE STUDY BACKGROUND

The design, fabless manufacturing, and marketing of semiconductor chipsets require intricate coordination of complex processes and supporting technologies. Semiconductor's strenuous development stages, long manufacturing lead time, and high cost of capital make it difficult to respond to swings in market demand, as well as contribute to project management complexity.

## THE PROBLEM

In order to effectively manage the complex fabless process, Qualcomm program managers must have fast access to a wide range of logistics data. Fresh and accurate data allows program managers to meet their goals, complete tasks on time, and do so without reducing project scope or increasing costs.

Qualcomm built a portal called Oasis to aggregate all logistics information into a central location. This allowed each program manager to see a comprehensive view of all fabless activities in order to run programs smoothly.

The concept of the Oasis portal made sense, but the original underlying technology did not. Oasis was dependent on a data warehouse approach. Integration of three new systems took an entire year. After the project was completed, the information delivered was immediately out of date. This required yet another system to be consolidated to supply new data needed. Project deadlines could not be met, as overall visibility into fabless activities was not readily available.

*"The key benefit of the Composite Information Server was the layered architecture. We now have structured data that can be easily managed with the capability of reuse."*

Mark Morgan,  
Senior IT Manager, IT Enterprise Architecture,  
Qualcomm

## AT-A-GLANCE

### Industry

Wireless Communications

### Business Problem Solved

Project managers needed easy access to chip related projects and information. However, gathering and aggregating the data from multiple sources was too costly and took too much time.

### Data Integration Patterns

Federation and Enterprise Data Sharing

### Composite Software Products

Composite Information Server 5.1

### Data Sources

Feature sets (multi-mode; graphics); Teams responsible for design (various leads); Fabs (paths); Taxonomy (tool; covers relationship between the chip sets); Project data

### Data Consumers

Program management team in chip division; Fab paths system (end-to-end process paths)

### Platform

Solaris

## ALTERNATIVES CONSIDERED

Continuing the warehouse approach would require a very large team to be hired and the project timeline would be no less than five years. The labor-intensive development methods historically either forced reduction in scope or increased budget. These risks ultimately lead Qualcomm to look in a new direction for a solution.

## THE SOLUTION

Qualcomm selected the Composite Information Server for its data federation, query optimization and enterprise data sharing capabilities. Composite was able to integrate data from multiple, disparate sources - anywhere across the extended enterprise - in a unified, logically virtualized manner for consumption by nearly any front end business solution, including portals, reports, applications, search, and more. The Composite Information Server was deployed between distributed data source systems and data consumers.

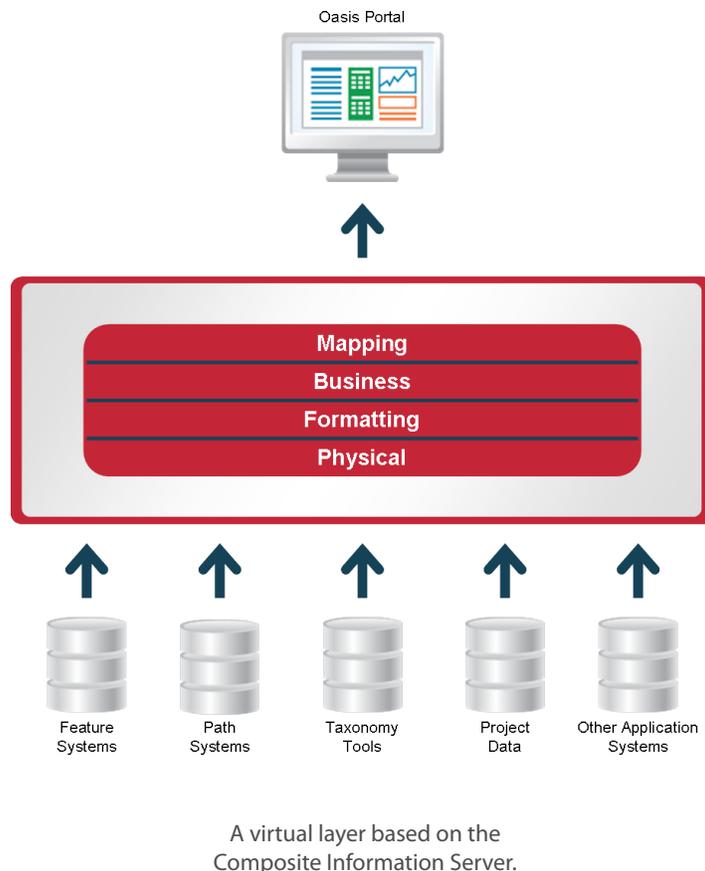
Within Composite, four different abstraction layers were implemented to simplify development as well as create efficient reuse of data.

The Physical Layer is established above data sources to onboard metadata that is required by the Data Virtualization layer in order to perform its mapping functions. The Formatting Layer sits above to provide simple tasks such as name aliasing, value formatting, data type casting, derived columns and light data mapping. Above this is the Business Layer, used to define a set of logical or canonical views that represent the business. The top layer is the Mapping Layer which serves to map the Business Layer into the format the Oasis portal can use to consume data.

This layered approach to data architecture was extremely important to Qualcomm for the structure and management of data. The layered design made data services easier to build, reuse, and maintain. Composite also provided an intuitive management console fortuning performance and administration.

With this solution, new capabilities and benefits are available to Qualcomm, including;

- Fast prototyping of data views for reporting an analytics
- Query optimization
- Reusability of data
- Easy-to-publish Web services
- Caching



## THE RESULT

- Faster time to solutions - requests met in hours/days rather than 6-8 weeks
- Increased agility
- Minimized latency between creating data services and usage
- Lower infrastructure cost