



## Decision Support/Data Warehousing Constituent Group Meeting Minutes

**Session:** Wednesday, October 2, 4:55 – 6:10 p.m. (24 participants)

**Facilitators:** **Kerry Washburn**, Director, Administrative Applications, Information Systems and Services  
**Robyn East**, Executive Director, Administrative Applications, Information Systems and Services  
 George Washington University

Participants represented a wide variety of institutions, and most are already involved with supporting decision support/data warehouse architecture or were in the process of developing a data warehouse.

### Format and Scope

The session opened with introductions, followed by a brief overview of the topics that Listserv subscribers had submitted as candidates for discussion.

One topic—how many institutions have data administration teams—was answered immediately: a total of nine participants reported having a data administration group at their institutions.

Participants elected to start by discussing enterprise reporting tools, the topic most often requested by listserv subscribers. Open discussion during the hour covered the following topics:

- enterprise reporting tools (what products are in use, factors considered in selecting a product, extent to which they are used by departmental staff and executives)
- issues with obtaining and meeting executive-level information requirements
- practices and considerations for “feeding” warehouse data to departmental systems
- frequency of refresh of warehouse database(s)
- most significant problems encountered in developing or supporting a data warehouse

### Web/Enterprise Reporting Tools

Product	Institution(s) reporting use or intended use	Comments
Cognos: Impromptu Web Reports, PowerPlay, Query	The George Washington University (GW) University of Geneva Princeton University of Minnesota	GW implementing Query this year, to replace Impromptu client-server for most users who develop their own reports Just beginning to implement Using Impromptu client, going to IWR next ye
Business Objects	Univ. of Notre Dame Emory University University of Michigan Univ. of Illinois Univ. of Chicago	

Product	Institution(s) reporting use or intended use	Comments
	Vanderbilt Univ.	
Brio	Univ. of Wisconsin Syracuse Univ.	Use Brio across all 17+ campuses. Features plug-in (doesn't have all functionality of client-server product) Not satisfied with Brio, wants pure web tool, but has not decided/purchased yet (issues with converting existing reports).
Oracle Discoverer	Boston College	Issue: only supports specific versions of browsers
Oracle Reports	Princeton Univ.	
Crystal Reports	Princeton Univ. McGill Univ.	Has an installed base, trying to convert users to Cognos suite
Safari Reports	U. of New Brunswick	Product was recommended by DataTel
MS Access	About 6 of attendees	Participants from about 6 institutions reported having a sizeable Access user base
SAS	Univ. of Kentucky Emory Univ.	
WebFocus	None	
Home-grown tool(s)	Indiana Univ.	Currently a central IT shop develops and publishes all reports; looking for an ad hoc reporting tool

#### Other comments about reporting tool features:

Some products touted as "web-based" are actually not purely browser-based, but rather involve plug-in tools.

Web tools are generally able to allow parameterized reports, but don't have the full functionality of their client-server predecessors/analogues.

Participants reported that Business Objects and Brio have announced intent to go to totally web-based products.

#### Common reasons cited for selecting particular tool(s):

- Friendly user interface: Business Objects, Cognos
- Ability to handle queries against large data sets: Cognos
- Compatibility with existing DBMS or operating system: Oracle Discoverer
- Ability to run on multiple platforms: Brio, Business Objects
- Objective of single-vendor solution for warehouse architecture: Cognos
- Extraction from multiple data sources without having to use a separate ETL tool: DataTel

Participants briefly noted that not all tools can support multi-pass queries (i.e., enable one query's results to drive another query, with results of the multiple queries displayed in one output report). Business Objects and Brio are two vendors whose products do support multi-pass queries. Oracle Discoverer's web version does not, but the desktop version does.

### **How users access warehouse data:**

GW, Princeton, and U. of Geneva allow access only through their supported tool suite; all other participants reporting allowing access to warehouse through other tools.

Users appreciate commitment to one tool in order to enable better support.

Participants agreed that there are two main constituencies of tool users: those who use reporting/analysis tools, finding them fun; and those who just want the information and prefer that others provide reports to them. Most agreed that the latter group is generally larger, though some people so hungry for information to do their jobs that they are happy to struggle with writing queries in order to have it.

Some institutions reported that their departments are starting to look for higher level of technical competence in new hires because they aware of need to use technology to get access to information.

### **How executives access warehouse information:**

U. of Wisconsin's tools have executive information system front-ends, permitting building of an executive interface. However, most execs task someone else to produce reports for them.

U. of Illinois reported the same experience, but noted that younger/newer executives are starting to want to analyze information on their own.

U. of New Brunswick has built portals for students and faculty, and plans to build its own executive decision support portal.

U. of Minnesota sends reports to executives, but reports feature drill-down capability which is typically used by the person whom the executive tasks with researching an anomaly in summary/exec level information.

### **Issues with Executive Information Requirements Analysis**

- Getting buy-in from data owners to implement requirements is often an issue.
- Time and effort: getting requirements can involve long sessions and intense questioning
- Vague requirements: executives may not know or state exactly what they want.
  - One alternative or companion strategy is to get candidate requirements from people who routinely produce ad hoc reports for executives (e.g., Institutional Research).
  - Another is to infer the details when presented with an executive need. For example, Baylor developed an application to address an executive desire to target mailings to potential applicants (those who would be most likely to accept an offer of admission). Given a zip code as input, the application produces probability of acceptance for a list of students, based on analysis of various profile data.
- Questions about data can impede progress; for example, one institution reported significant effort in getting requirements for reports. The data were to be used as a basis for resource allocations, so when candidate reports were distributed for validation, all questioned the validity of the information.

### **Practices and Issues Related to Data Feeds**

One issue is whether to push the data to department-maintained systems vs. enable users to "pull" the data. Participants agreed that the more common practice is to put the data out in the warehouse, make sure they are clean and then allow users to pull.

GW has averted proliferation of shadow systems by allowing users to pull from a data mart.

An important issue is users' knowledge of the data (definitions, business rules, confidentiality requirements, etc.); ensuring that data are used and interpreted appropriately requires training. U. of Kentucky requires employees to sign an "appropriate use" agreement with dismissal as consequence of violating the agreement, to enforce appropriate use.

Must ensure that users understand whether warehouse data constitute "official" institutional figures. For example, Wisconsin does not certify data as official University data; that institution's official numbers come from Institutional Research.

### **Frequency of Data Refresh**

All agreed that the optimal refresh frequency depends on the type of data and business process.

- Syracuse is planning to refresh student data several times per day during registration periods.
- U. of Kentucky's refresh frequency depends on time of year and data type, with maximum frequency of several times per day.
- GW began with weekly refresh of its' student data, then increased to daily once student accounts receivable information was added to the warehouse.
- Cornell's warehouse provides data to 50 budget managers, and provides real-time updates for budget data.

### **Major Problems Encountered in Building or Maintaining a Data Warehouse**

Verifying integrity of data or reconciling reports produced by the warehouse with reports produced by source system.

- Often users say a report is wrong, but can't or won't specify how to correct it. When there is no institutional knowledge of how to fix the source system data, the warehouse gets blamed for the poor data quality.
- Data definition issues uncovered in determining the reasons for differences between reports produced by the warehouse vs. source system query.

Administrative departments not wanting to allow other departments to see or use their data; in other words, reluctant to convert from data "owners" to data "stewards."

Administrative departments not having resources to maintain integrity of historical data that, while meeting an enterprise or executive need, aren't required to support their own business processes.

Issues with how to define, store, provide access to, and maintain metadata.

Staffing in departments that support data definition/business rules for the warehouse.

User acceptance.

**Submitted by:** Kerry Washburn  
Director, Administrative Applications, Information Systems and Services  
George Washington University  
[kjw@gwu.edu](mailto:kjw@gwu.edu)