

SA Reporting Open Forum

January 18, 2007

Polydata Web site – <http://polydata.calpoly.edu>

Send questions to: polydata@calpoly.edu

Agenda

- Data Warehouse Strategy
- Data Warehouse Upgrade Status
- PeopleSoft 8.9 Upgrade
- Enrollment Data Model
 - Star schema design
- Historical Data
- New Deliverables

Data Warehouse Strategy

- Deploy data warehouse solutions to support critical SA reporting needs
- Begin developing data models in a 'best practices' design (architecture by data warehouse guru Ralph Kimball)
 - Star Schema
- Develop new security model
 - Data classification
 - Business process based
- Deploy and support web-based query & reporting tools
 - Discoverer
 - BI Publisher (tool evaluation in February)
- Integrate data warehouse solutions with Enterprise Portal

Data Warehouse Upgrade

- Upgrading data warehouse environment to latest Oracle 10g version
- Migrating data warehouse to new dedicated servers
- Upgrading Oracle Warehouse Builder tool for better functionality and integration with Discoverer infrastructure
- Estimated production cut-over is February '07

PeopleSoft 8.9 Upgrade

- Current version of P/S is 8.0
- P/S 8.9 will be in production in January '08
 - Project to run from Feb – Dec '07
- Data warehouse will need to upgrade
 - Impact not yet known
 - Includes both HR and SA data warehouse solutions
 - Current functionality will be available with 8.9
 - Will begin analysis in March time frame

Enrollment Data Model

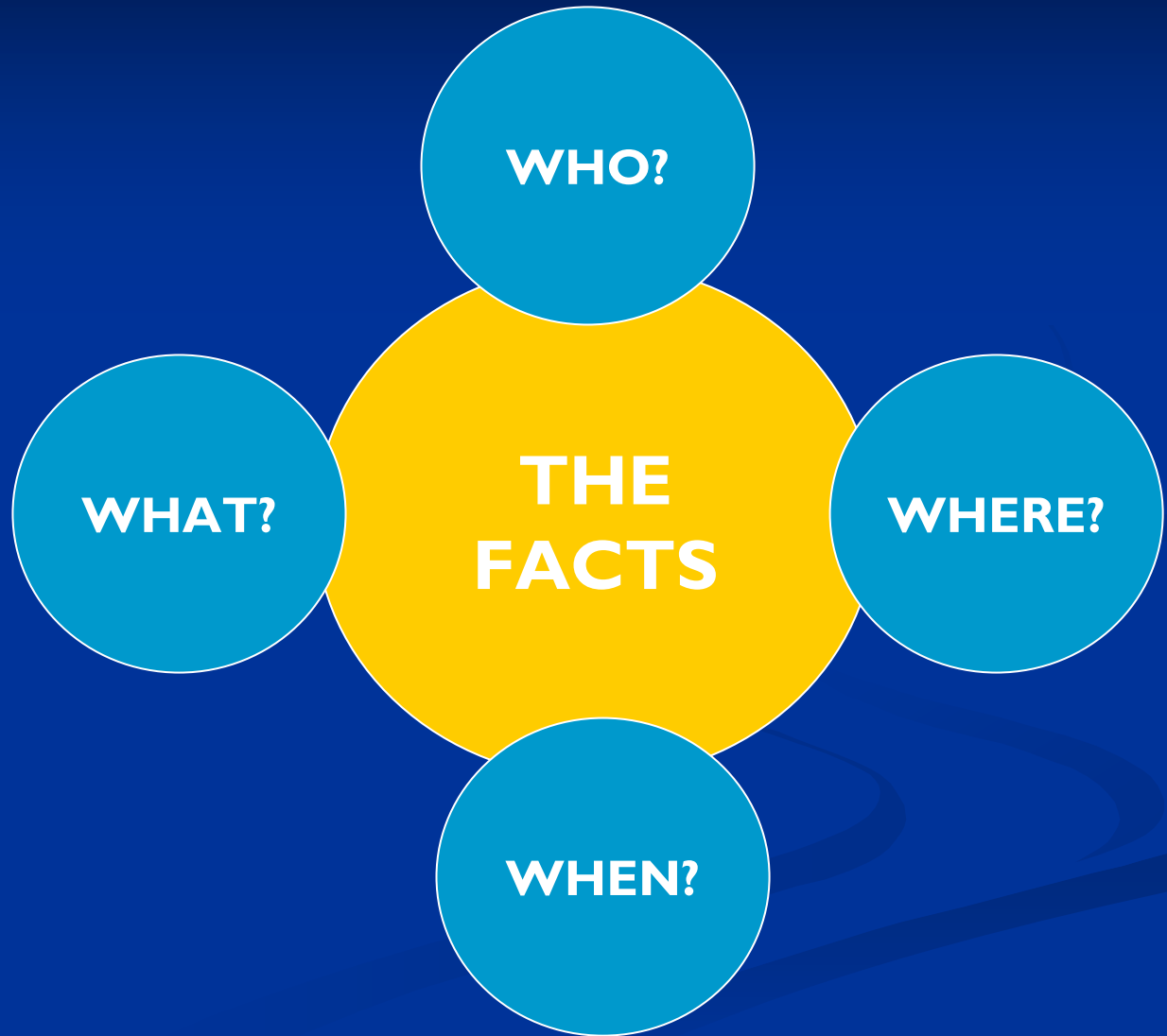
- Pilot group identified
- Requirements gathered
 - Series of interviews held
 - Requirements documented
- Data model designed
 - Star schema
 - Includes historical data
- Coding to start after data warehouse upgrade to 10g complete
- Implementation targeted for June '07

What is a Star Schema?

The star schema is perhaps the simplest data warehouse schema. It is called a star schema because the diagram of this schema resembles a star, with points radiating from a central table. The center of the star consists of a large fact table and the points of the star are the dimension tables.

Example Star Schema

- Fact tables contain process activity located in the center (quantitative data)
Some example facts are grade, SCU, and fee amount



- Dimensions tell the story and provide the detail to the facts.
What student grade?
When did the student get charged that fee amount?

Star Schema Benefits

- Schema is easy to understand
 - Based on business process
- Easy to define hierarchies
 - Major-Department-College
 - Day-Month-Calendar Year
 - Day-Term-Academic Year
- Easy to navigate
 - Number of table joins reduced
 - Star schema recognized by leading query tools
- Low maintenance
 - Dimension tables shared between data models
 - Can add new fact tables which use existing dimensions

When to Use the Star Schema

Type of Reporting	Source	Example
Operational	PeopleSoft/Other Data Warehouse Systems	<ul style="list-style-type: none">■ What happened to my department today that I need to resolve by the end of day?■ What is the current state of enrollment as of 2:00pm today?
Tactical	PolyData Data Warehouse	<ul style="list-style-type: none">■ How has enrollment changed over the past week?■ What colleges have classes set up without a class time?
Strategic	PolyData Data Warehouse	<ul style="list-style-type: none">■ What are my student retention rates over the last 3 years?■ What students are prone to perform poorly?

Historical Data

- Approach to delivering historical information
 - Snapshots at the end of the term (day before next term)
 - Fall 2068 term forward
 - Data remains static from that point forward
- Known issues
 - Status of the student's program stack has changed (completed/discontinued)
 - We lose the ability to associate the student with their most recent active program stack (college, dept, major, etc)
 - Will redeploy historical data once issue is resolved
- Queries affected
 - Class list
 - For students with an inactive program stack, missing plan information
 - Dean's list
 - Will redeploy using an extract from the SA system to ensure accuracy

New SA Deliverables

Data Elements & Queries

- New data elements added to enrollment views and queries
 - Term gpa
 - Term earned hours
 - Last graded term
- New data elements added to class list views and queries
 - Primary career code and description
 - Primary college and description
 - Primary degree code and description
- New repository queries
 - Commence
 - AP/DQ
 - Grades added to class list views and queries
- Future Deliverables
 - Degree information
 - Grade report repository query
 - Primary mailing address

New SA Deliverables Processes

- PolyData Table and Data Element Request Form
 - Used to request new data elements
 - Form located on the PolyData web site:
www.polydata.calpoly.edu see Request Forms
- Send questions to polydata@calpoly.edu
- SA Reporting Open Forums
 - Will be combined with monthly SA Open Forums to allow for regular updates

Questions?