Meeting the Needs of Multiple Clients

Information Reporting With SPSS's *SmartViewer Web Server*

Joseph W. Filkins, Susan Stachler, Liz Sanders, Gerald McLaughlin, DePaul University

Edward J. Torpy, SPSS

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Overview

- Background
- Challenges and System Requirements
- Discussion of Available Tools
- SmartViewer Demo
- Evaluation and Perspective

Background

- **Office of Institutional Planning and Research (OIPR)** prepares institutional information including Fact File, Common Data Set, Student Surveys

- **Enrollment Management Research (EMR)** prepares information to support enrollment services and enrollment management decision-making

Reporting Challenges

- **Level of Analysis**
  - Different users have different needs
  - Summary-level vs. program-level data
- **Users have follow-up and ad-hoc questions**
  - Information often generates more questions
- **Users have growing demands for information**
  - Need to support information-based decision-making

User Needs

- **Easy to find information and easy-to-use tools**
  - Look easy to use, work quickly, coordinated security
  - Users may only interact with software occasionally
- **Interaction with data for ad hoc queries**
  - Empower the users to ask and answer questions
- **Consistency**
  - Minimize back-end data management for users
  - Provide seamless interface with changing transactional systems

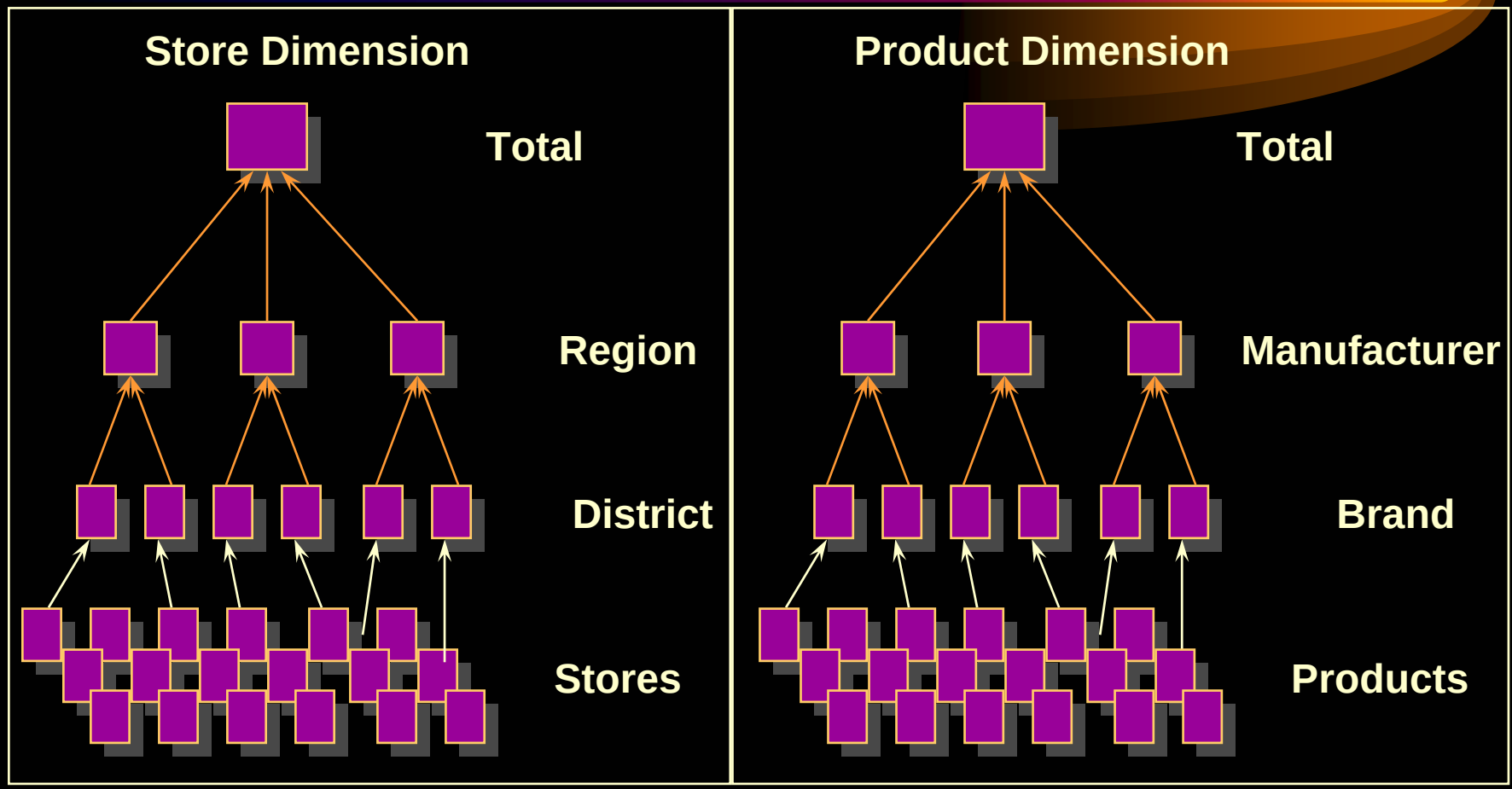
Requirements

- Allows for interactivity with the data
- Software independent for users
- Must be able to accommodate data from multiple underlying sources and changing systems

Options: BI Tools

- **Reporting**
  - Static reports – typically paper or HTML
  - Example: Crystal Reports, etc.
- **OLAP**
  - Hierarchical, multi-dimensional data cubes
  - Example: Cognos, Business Objects
- **EIS (Executive Information Systems)**
  - Often based on a “balanced scorecard” approach
  - Example: SAS/EIS (development environment)

OLAP's Hierarchical Dimensions



Other Options

- **In-house-development**
  - less up-front cost for software
  - but significant actual costs in development time & effort
- **Alternatives to true OLAP**
  - offers some multi-dimensional analysis
    - Excel
    - SPSS SmartViewer

SPSS SmartViewer Web Server

- **More affordable, but less powerful than OLAP products such as Cognos**
- **Runs off SPSS and easy to use**
  - SPSS is used to access, merge, clean, and transform the data
  - SPSS is used to “publish” the data to SVWS

Technical Requirements for SVWS

- **Server: Windows NT or 2000**
  - 1GB RAM
  - 500MZ processor
  - 10GB disk space (372 MB required to install software, the rest is for document storage, user directory, etc.).
- **Server: Sun Solaris 2.6 or higher (requires a Sun UltraSparc2 server or greater)**
  - 1GB MB RAM
  - 500MZ processor
  - 10GB of disk space (453 MB is required to install the software, the rest is for document storage, user directory, etc.).

Steps

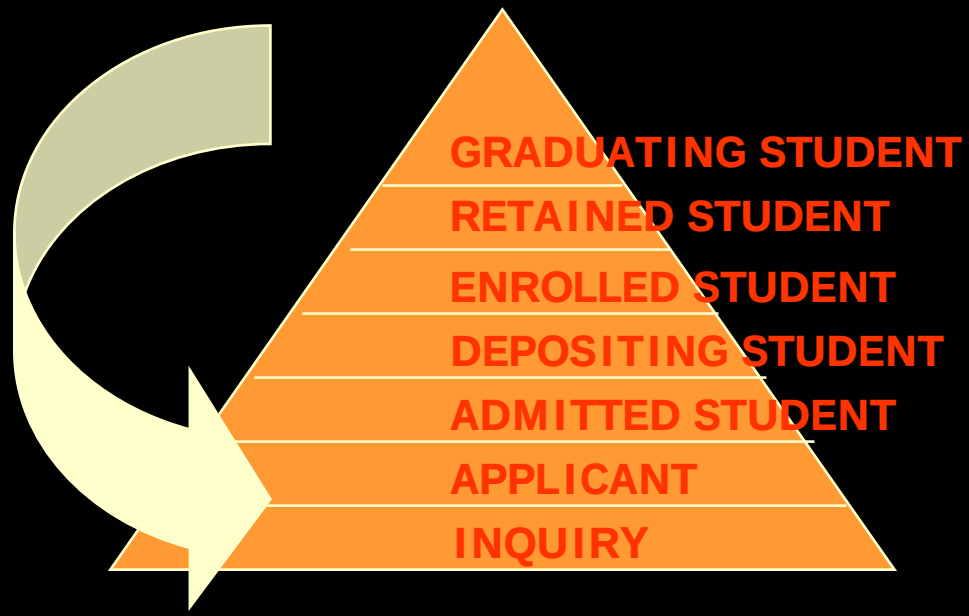
1. Choose an issue people want to explore
2. Pull all data into an SPSS dataset/format
3. Restructure the data to allow for data exploration
4. Generate OLAPs, crosstabs
5. Add relevant text or graphics
6. Publish SPSS output with SVWS to Web
7. Demonstrate to generate interest, provide instruction
8. Distribute, do follow-ups to gather feedback

Types of Data in SVWS at DePaul

- Admission Cycle Tracking
  - Using Apps, Admits, and Enrolled
  - By gender, race, ACT scores, etc.
- Enrollment Data
- Student Survey Data
  - Five years of student satisfaction data
  - Graduating Student Survey

SVWS Demo

- Admission Pyramid: modification of the traditional funnel, evaluate success at each level



Additional Analysis of OIPR's Graduating Senior Survey

SVWS Demo

- Research Questions
  - What are the differences between students who would choose DePaul for graduate work and those who would not?
  - How can we use this information for more effective marketing and recruiting?

SVWS Demo

- SmartViewer and survey data
  - Provide summary and specific information on college, program, and demographics
  - Time needed up-front for design
  - Savings in consolidating static Web pages and providing drill-down interactive tables
  - Text, graphics and data can be provided

Evaluating Success

Did SVWS meet our requirements?

- **Users can interact with data**
  - Importance of demos, follow-ups for feedback and training
  - Decentralizing access also decentralized interpretation
- **SPSS can pull in data from multiple sources**
  - Must carefully plan dataset and cubes
- **Software independent for users**
  - IE and Netscape
- **Easy to produce output with SVWS**
  - Speed of access and interactivity depends on server/hardware

Implications

Learning and Decision Support

Reducing uncertainty in the time available.

- Encourages contact between “teacher” and “learner”
- Builds cooperation between “learners”/user group
- Practices active learning techniques and involvement
- Gives prompt and accurate feedback
- Emphasizes spending time on tasks
- Communicates high expectancies of continued learning
- Respects diverse talents and ways of learning.

Chickering and Gamson 1987

For More Information

Joe Filkins: jfilkins@depaul.edu
Gerry McLaughlin: gmclaugh@depaul.edu
Liz Sanders: lsander3@depaul.edu
Susan Stachler: sstachle@depaul.edu
Ed Torpy: etorpy@spss.com

Or see our websites:
http://oipr.depaul.edu/open/general/presentations.asp
http://admission.depaul.edu/emr/publications.html