Meeting the Challenge: Cal-PASS
California Partnership for Achieving Student Success
www.calpass.org
A Matter of Misalignment

“...the coursework between high school and college is not connected; students graduate from high school under one set of standards and, three months later, are required to meet a whole new set of standards in college.”

- Stanford University Bridge Project
http://www.stanford.edu/group/bridgeproject/execsummary.html
What is Cal-PASS?

★ Links primary, secondary and post-secondary institutions on a regional basis
★ Tracks students from one segment to the next
★ Engages faculty across segments in instructional conversations
★ Includes over 400,000,000 records from over 4,000 K-12 schools, community colleges, and universities throughout California
Universities (28)

**CSU**
- Channel Islands
- Chico
- Dominguez Hills
- Fresno
- Humboldt
- Long Beach
- Los Angeles
- Monterey Bay
- Northridge
- Pomona
- Sacramento
- San Bernardino
- Stanislaus
- San Francisco
- San Jose
- Sonoma

**UC**
- Berkeley
- Davis
- Los Angeles
- Merced
- Riverside
- San Diego
- Santa Barbara
- Santa Cruz

**PRIVATE**
- Otis College of Art and Design
- National University
- Point Loma Nazarene
- University of the Pacific
Cal-PASS Unified Dimensional Data Model

- **Fact Table**: Organization
- **Dimension Table**: Student, Course, Status, Outcome, Award, Term, Taxonomy
- **Foreign Key** relationships connect the Fact and Dimension Tables.
Cal-PASS Data Flow

- Analytical
- Integrated K-12/CC/Univ
- Time-dependent
- 2NF (Redundant CK)
- Optimized Indexing

- Storage
- Application Integration
- Key-value pairs (KVP) design

- Semistructured
- Format/value Validation

CUSTOM FILES

Universities
- UC
- CSU
- Private

K-12
- LA

Dimensional Model

Object Repository

Cal-PASS Submission
Data Security

FERPA compliant

Data are anonymous – personal identifier information is removed or encrypted

Locally run program encrypts and validates data prior to transmission

Servers in secure, Level IV data center with firewall and controlled access

Security document available at www.calpass.org

“Success at Every Level”
Professional Learning Councils (PLC’s)

★ Mathematics
★ EL
★ Science
★ English
★ Tech Prep
★ Counseling
Cal-PASS Research

★ Action Research Paradigm
  ★ Faculty, administrators, and local researchers are active participants
  ★ Iterative process to refine analysis
★ Common questions become standard reports or web based queries produced by Cal-PASS staff
★ Locally unique questions handled by local researchers with assistance from Cal-PASS staff
Current Projects

★ EDD Data Linking
★ CTE Transfer
★ Foster Youth
★ Middle School to College Report
★ LA County Data Linking
Changing the Paradigm: OLAP Applications

- OLAP = On-Line Analytical Processing
- Like Excel pivot tables
- Stores pre-computed aggregations of data with B-Tree indexing for delivering fast retrieval times and fast calculation
- Enables users to perform analysis of data quickly with drag-and-drop manipulation of variables and dynamic visualization
- Web-based for easy access – all processing is performed on the server so it does not tie up your work station (zero footprint)
3 Layers of the Application

User Interface - Dundas

OLAP Cube - SSAS

Database(s) - SQL Server

MDX

SQL
Development Tools

.NET
SQL Server
  – Storage
  – Integration Services
  – Analysis Services
BIDS
Dundas
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