ShopAll Return Module

Group 2 (H49)

Akanksha Singh (525772)
Gaurav Paliwal (525705)
Nikhil Trivedi (525746)
Pragyan Acharya (525867)
Pranjal Mishra (525850)
Ratika Malik (525695)
Suman Kumar (525818)

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What is Business Intelligence ?

A Brief history of Business Intelligence

What is Business Intelligence ?

Where have we been ?

What is Business Intelligence ?

Where are we now ?

What is Business Intelligence ?

Where are we going ?

What is Business Intelligence ?

Why Should we care ?

According to Wikipedia

What is Business Intelligence ?

Business intelligence (BI) mainly refers to computer-based techniques used in identifying, extracting,and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes. BI technologies provide historical, current and predictive views of business operations.

What is Business Intelligence ?

But that BI is still hard to understand ?

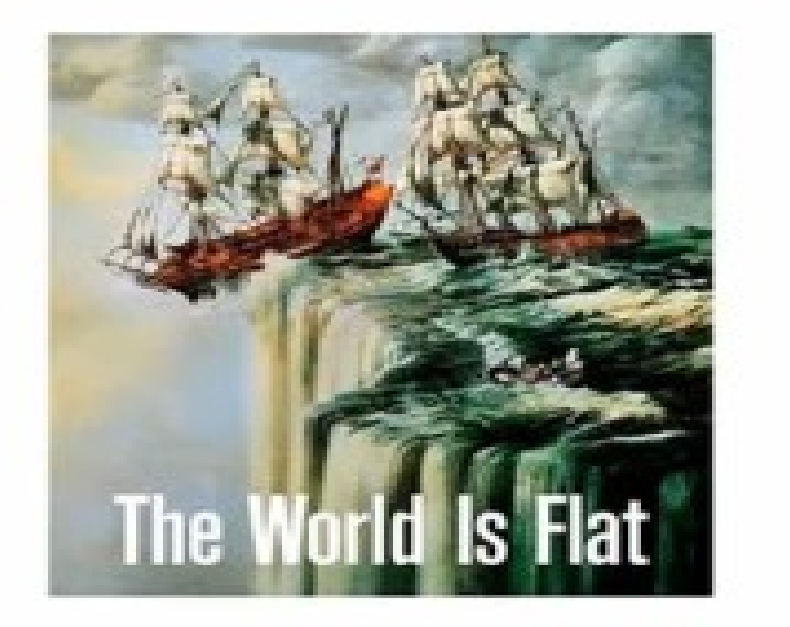
Is what that what it took to make business intelligent ?

What is Business Intelligence ?

What is Intelligence ?

What is Business Intelligence ?

Knowledge and Understanding



What is Business Intelligence ?

Meaning and Context

What is Business Intelligence ?

Foresight

What is Business Intelligence ?

Solve complex problems

What is Business Intelligence ?

To make decisions.

What is Business Intelligence ?

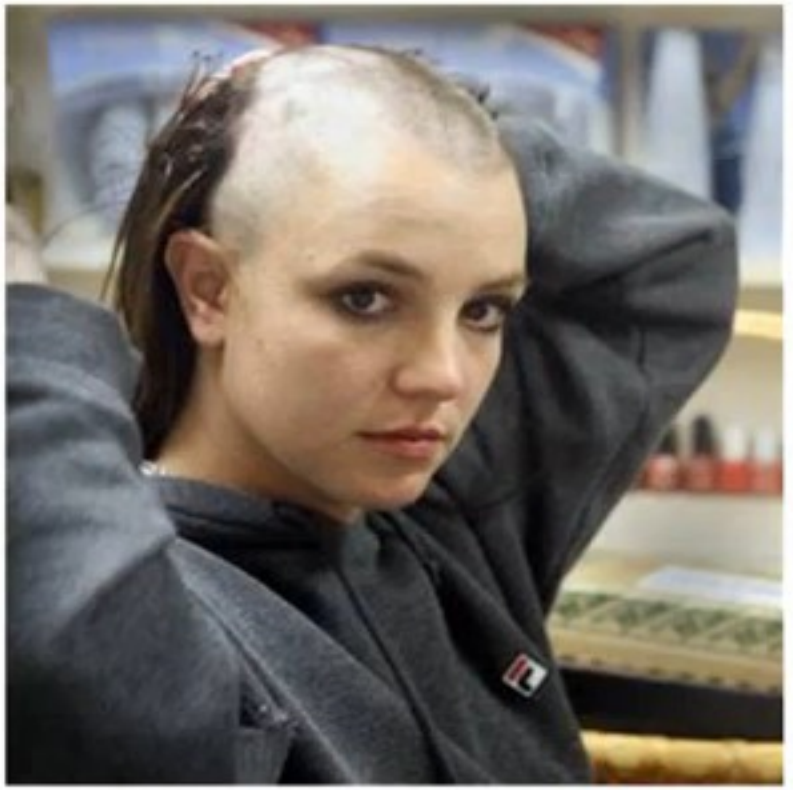
We make decision every time ?

What is Business Intelligence ?

Sometimes good.

What is Business Intelligence ?

Sometimes bad.

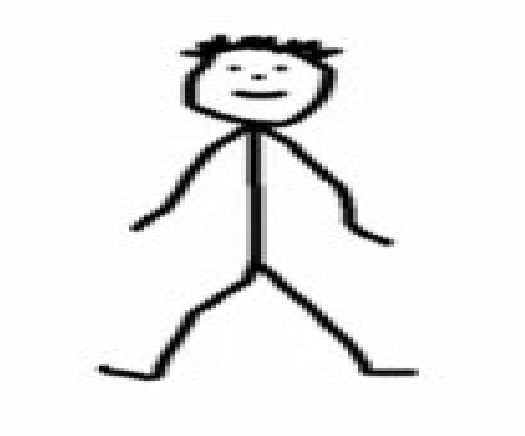


What is Business Intelligence ?

Intelligence = Decision

What is Business Intelligence ?

Decision = People



Because people make decisions

What is Business Intelligence ?

What makes good decision ?

Valuable information.

What is Business Intelligence ?

Intelligence + Information

=

Good Decision

What is Business Intelligence ?

Information provide answers

What is Business Intelligence ?

Information is distributed in various places.

What is Business Intelligence ?

You need to aggregate Information from various sources.

What is Business Intelligence ?

Solution is Informatica.

What is Business Intelligence ?

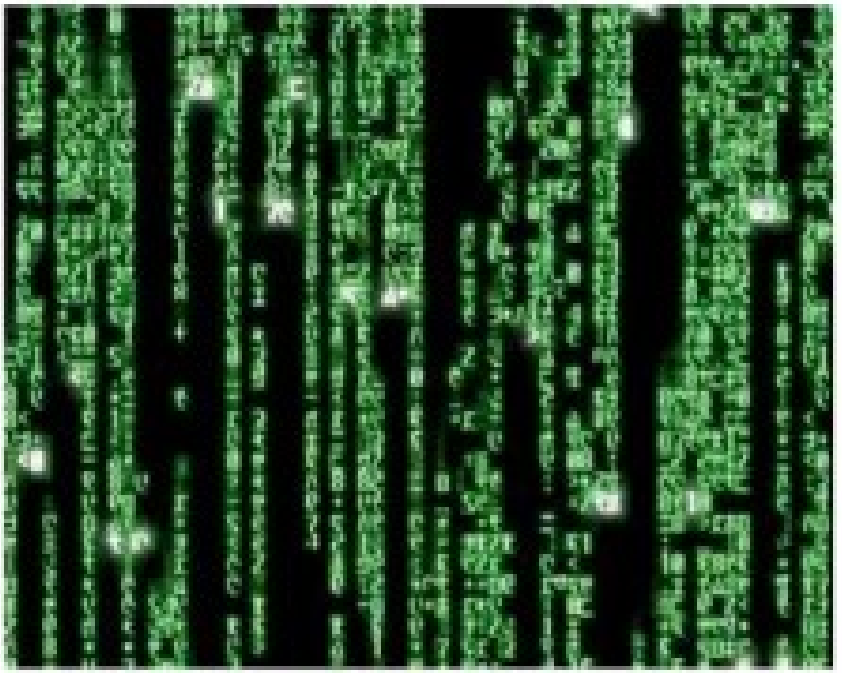
Decisions are made by Information Analysis.

What is Business Intelligence ?

But BI is about usability as business people don't have time and they need time line based analysis.

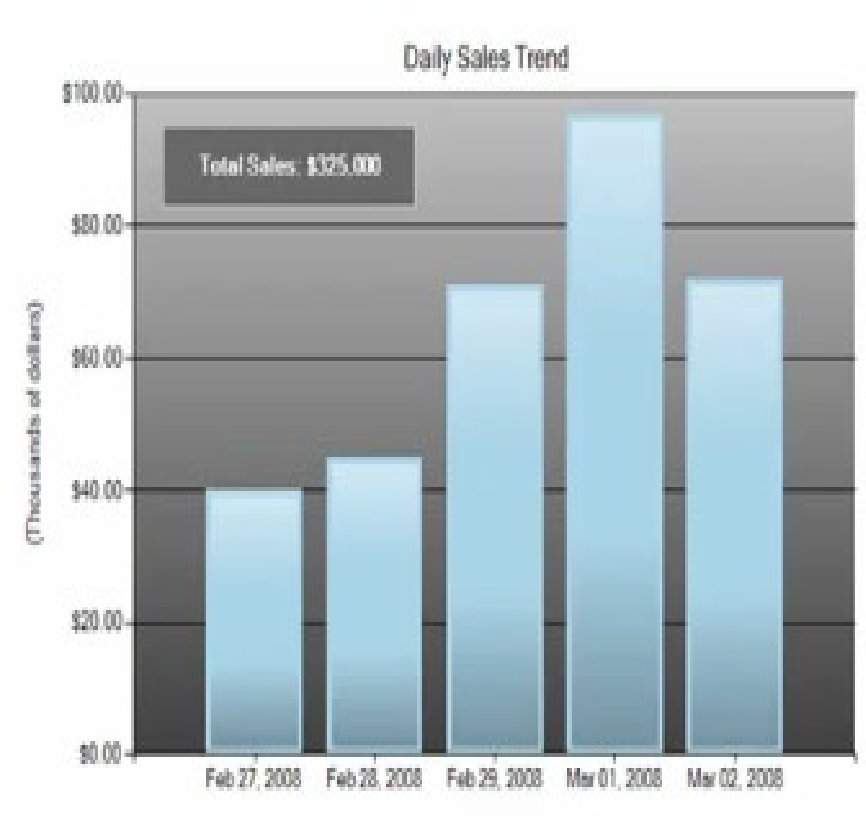
What is Business Intelligence ?

To turn data



What is Business Intelligence ?

Into right format



What is Business Intelligence ?

What you need is Business Objects.

What is Business Intelligence ?

1. Shyam owns a shop.

2. His shop has 3 floors.

3. Jam and bread are on same floor adjacent to each other.

4. Butter is on different floor.

What is Business Intelligence ?

5. He gives all his sales data to the abc organization.

Sales Data → Raw Information

What is Business Intelligence ?

6. abc organization observed that 25% of the people who bought bread also bought jam.

7. But 50% of the people who bought bread also bought butter.

What is Business Intelligence ?

8. Prediction can be made that bread and butter combination is more likely purchased compared to the bread and jam combination.

   He then exchanged the butter with the jam location.

What is Business Intelligence ?

9. This is called Business Intelligence.

10. And the outcome is Happy Customers and Better revenues.

What is Business Intelligence ?

BI helps in the following processes :

1. Decision support system
2. Future trends analysis
3. Business patterns

etc.

ETL Process

1. ETL stands for Extraction – Transformation – Loading.

ETL

1. Data is taken from different sources, lets say US and UK.

2. In US database the shoe size is in mm size, In UK database it is in cm size.

3. We need both of them in common format, so that we can use it for future predictions

Extraction

UK(mm) ----->

→ Source ---> Intermediate State

US(cm) ----->

Transformation

Source UK(mm) ----->

-----> Common format(mm)

Source US(cm) ----->

Type of Transformation

Types of Transformations :

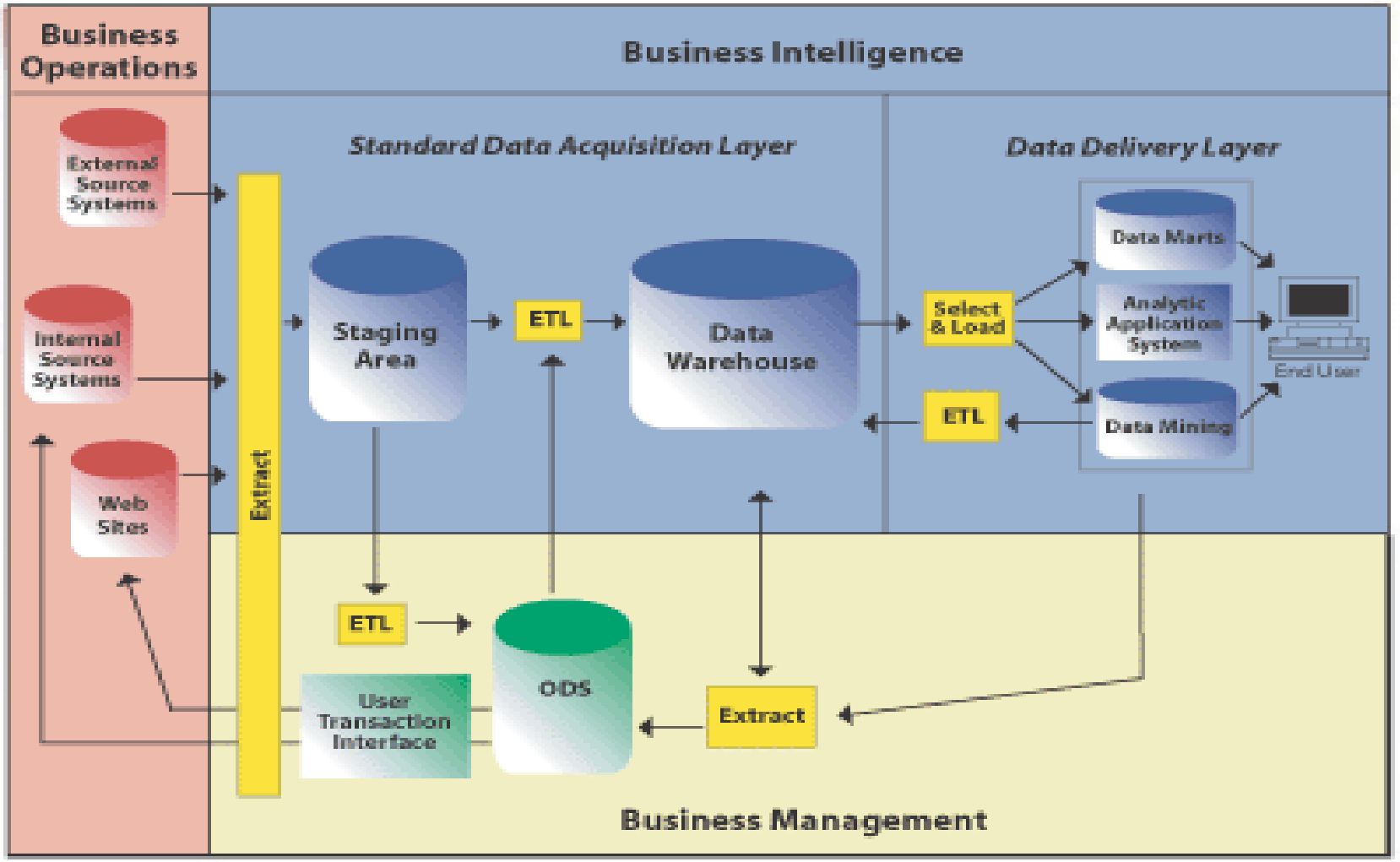
1.1. Active
1.2. Passive

Loading

Common format(mm)

Data Warehouse (OLAP)

ETL


Business Operations
Business Intelligence
Standard Data Acquisition Layer
Data Delivery Layer
External Source Systems
Internal Source Systems
Web Sites
Extract
Staging Area
ETL
Data Warehouse
Select & Load
Data Marts
Analytic Application System
End User
ETL
Data Mining
ETL
ODS
User Transaction Interface
Extract
Business Management

Tools for ETL

Informatica

Benefits of Informatica

Data Migration

Legacy Retirement

Data Synchronization

Data Replication

Data Consolidation Test

Data Management

Data Archiving

Complex Event Processing

B2B Data Exchange

Master Data Management

Identity Resolution

Cloud Data Integration

Data Warehousing

Data Quality

ShopAll Example

http://gauravpaliwal.com/LiveExamples/CustomerIndex.html

ShopAll Scenario

Populating Data Warehouse

Preserving history for trends analysis

1. Methods :

    1.1. Slowly Changing Dimensions 0
    1.2. Slowly Changing Dimensions 1
    1.3. Slowly Changing Dimensions 2
    1.4. Slowly Changing Dimensions 3

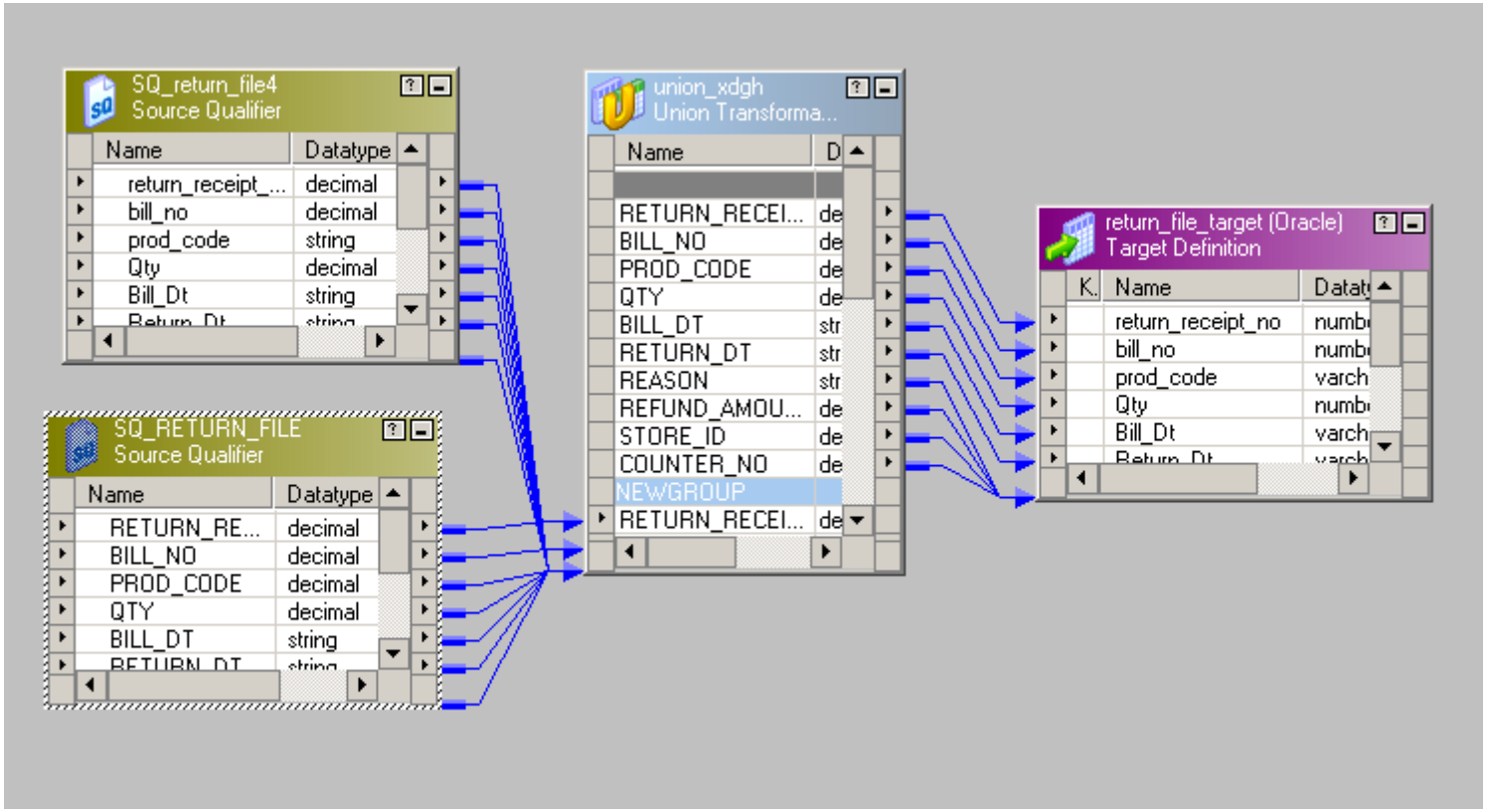
Slowly Changing Dimensions 0

The **Type 0** method is a passive approach to managing dimension value changes, in which no action is taken. Values remain as they were at the time of the dimension record was first entered.

Slowly Changing Dimensions 0

Example

Slowly Changing Dimensions 0



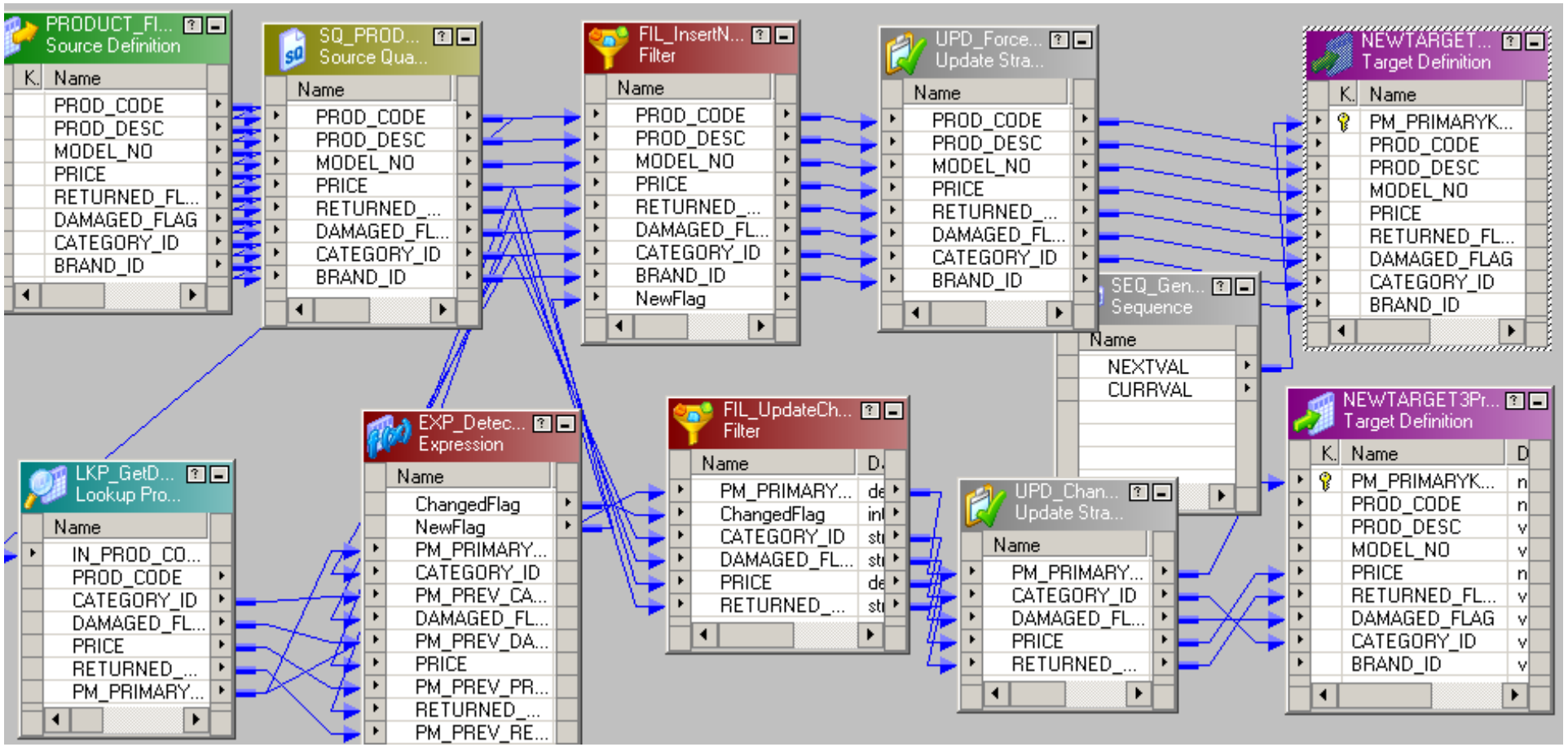
Slowly Changing Dimensions 1

The **Type 1** methodology overwrites old data with new data, and therefore does not track historical data at all. This is most appropriate when correcting certain types of data errors, such as the spelling of a name.

Slowly Changing Dimensions 1

Example

Slowly Changing Dimensions 1



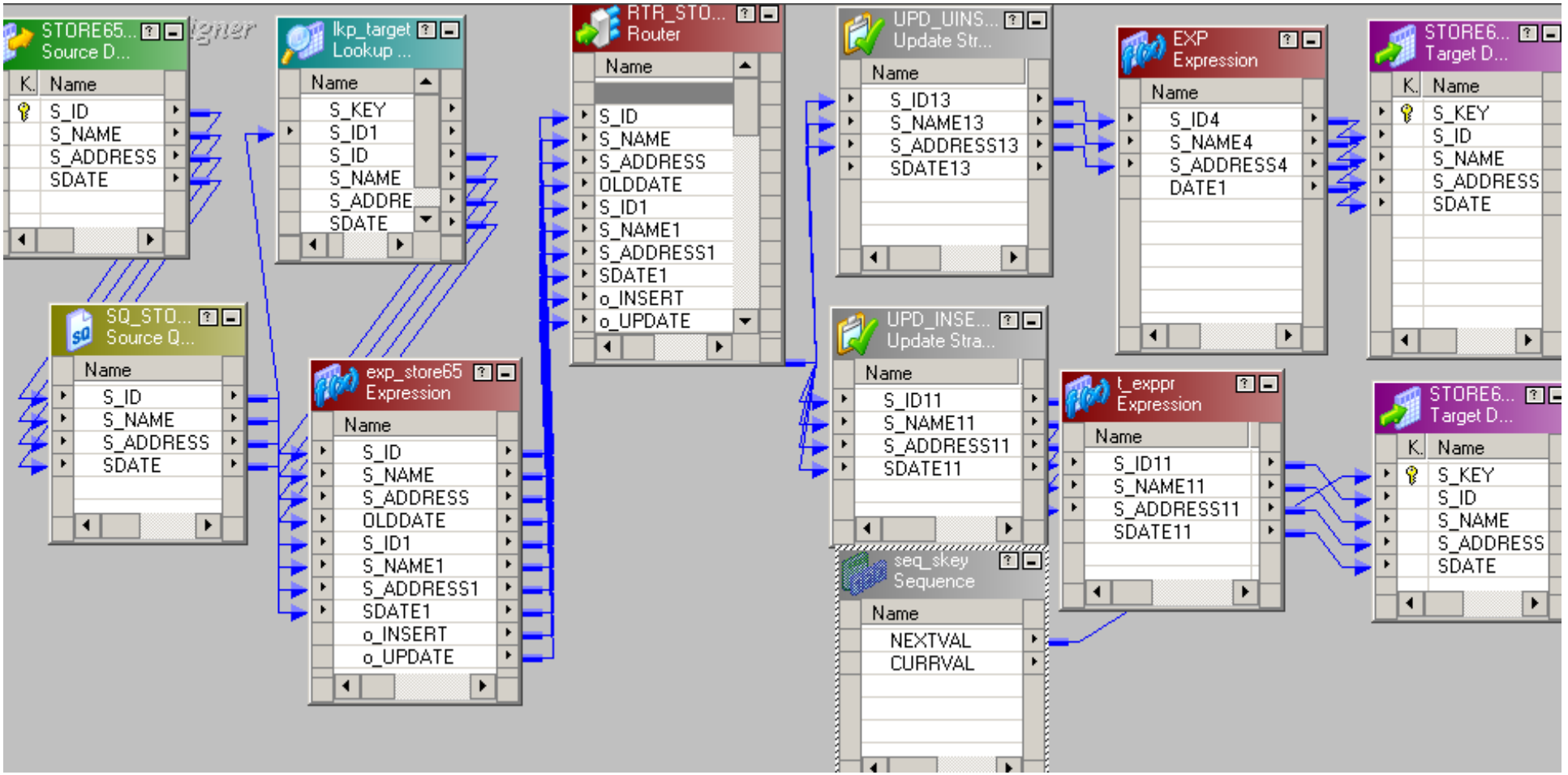
Slowly Changing Dimensions 2

The **Type 2** method tracks historical data by creating multiple records for a given natural key in the dimensional tables with separate surrogate key and/or different version numbers. With Type 2, we have **unlimited history preservation as a new record is inserted each time a change is made.**

Slowly Changing Dimensions 2

Example

Slowly Changing Dimensions 2 (Store)



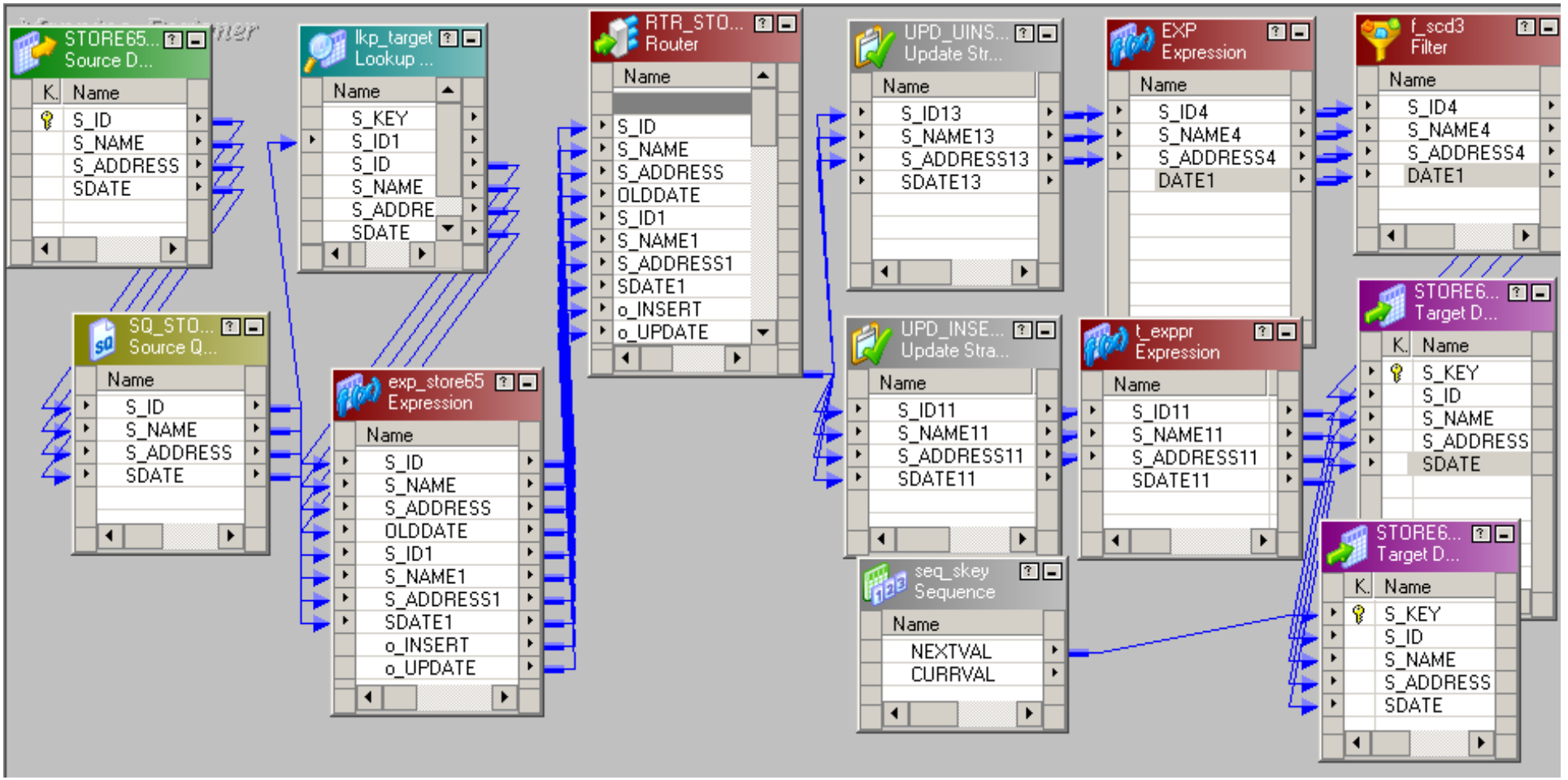
Slowly Changing Dimensions 3

The **Type 3** method tracks changes using separate columns. Whereas Type 2 had unlimited history preservation, Type 3 has limited history preservation, as it's limited to the number of columns designated for storing historical data.

Slowly Changing Dimensions 3

Example

Slowly Changing Dimensions 3

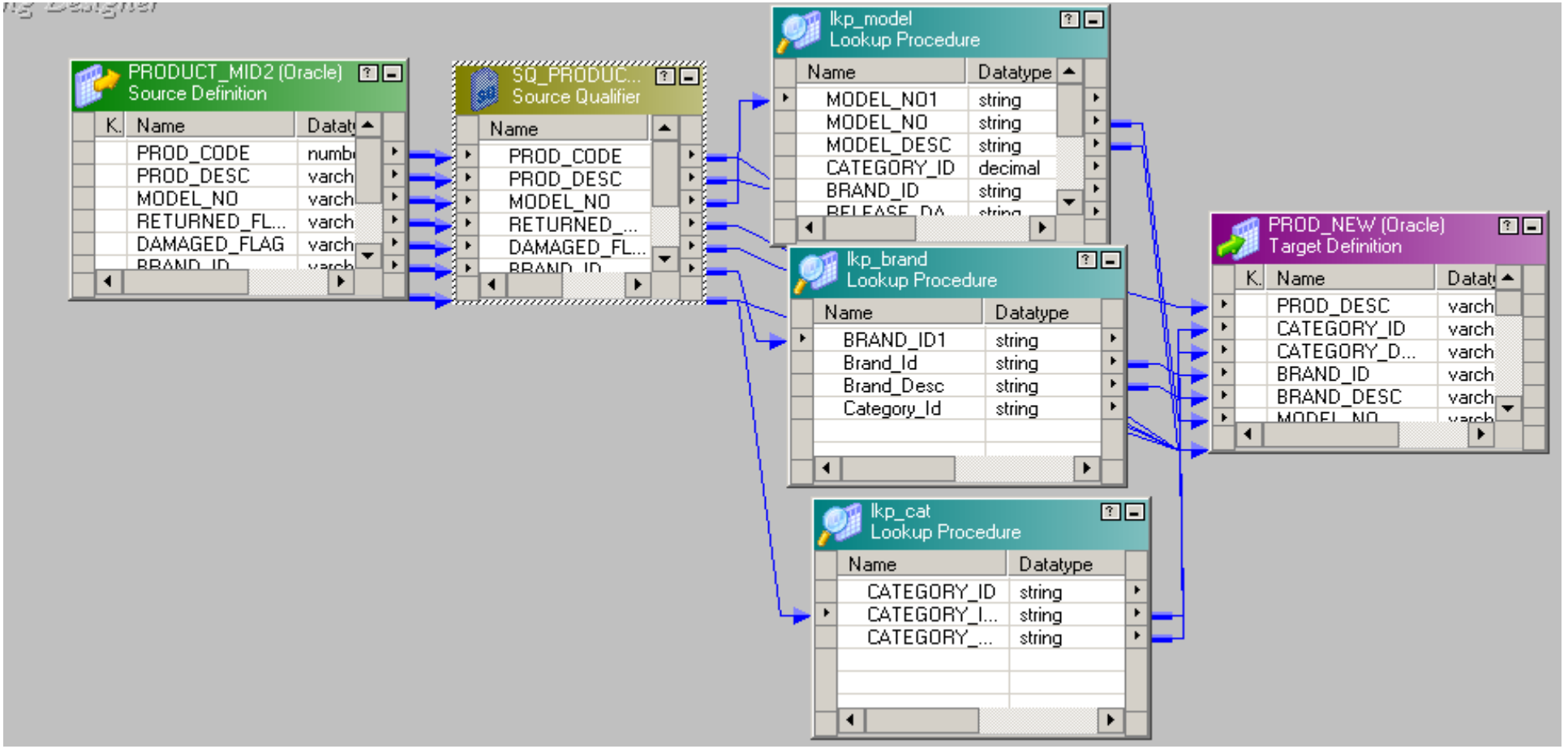


ShopAll Scenario

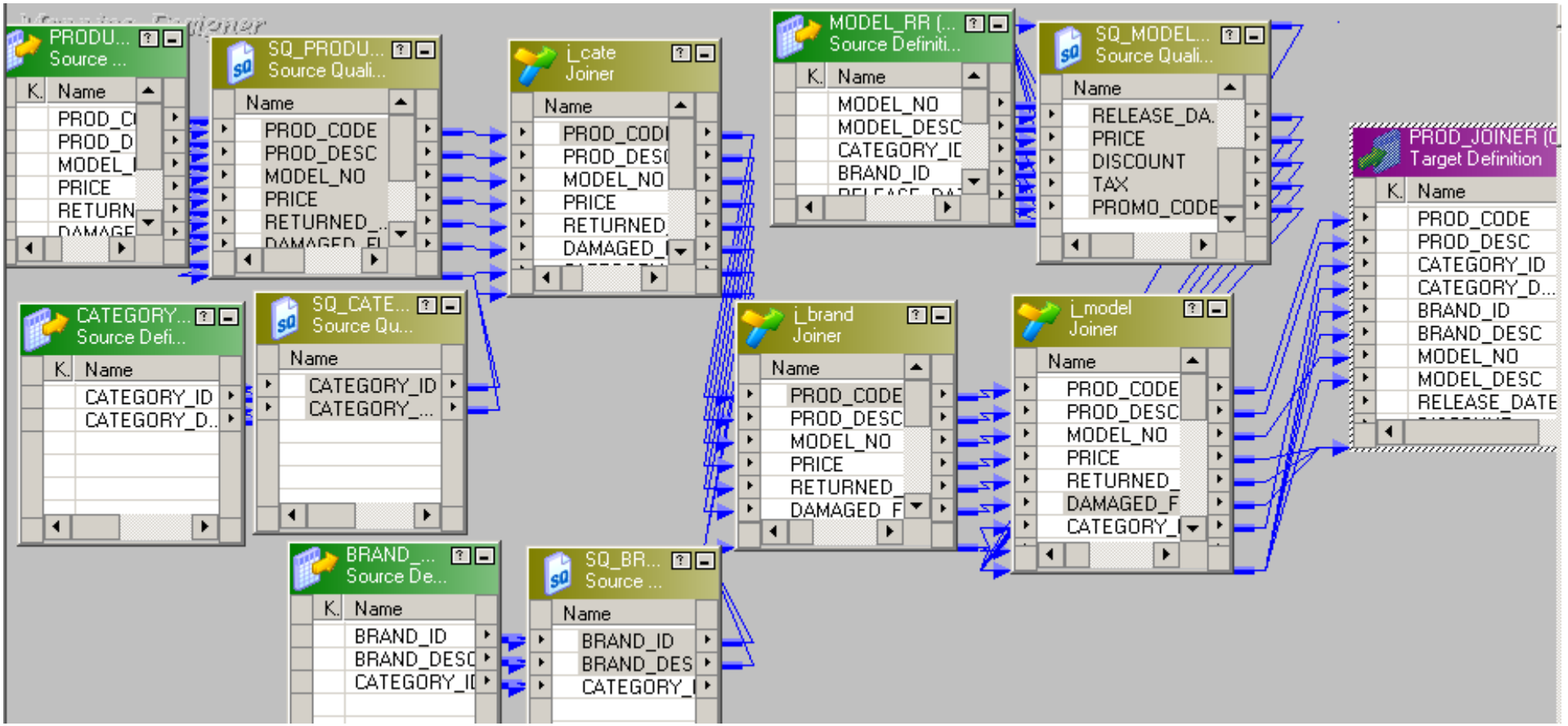
1. ETL process for populating following tables :

    1.1. Loading product table using lookup.
    1.2. Loading product table using joins.
    1.3. Return fact table loading using one to one mapping.
    1.4. Return fact table loading using heterogeneous source.

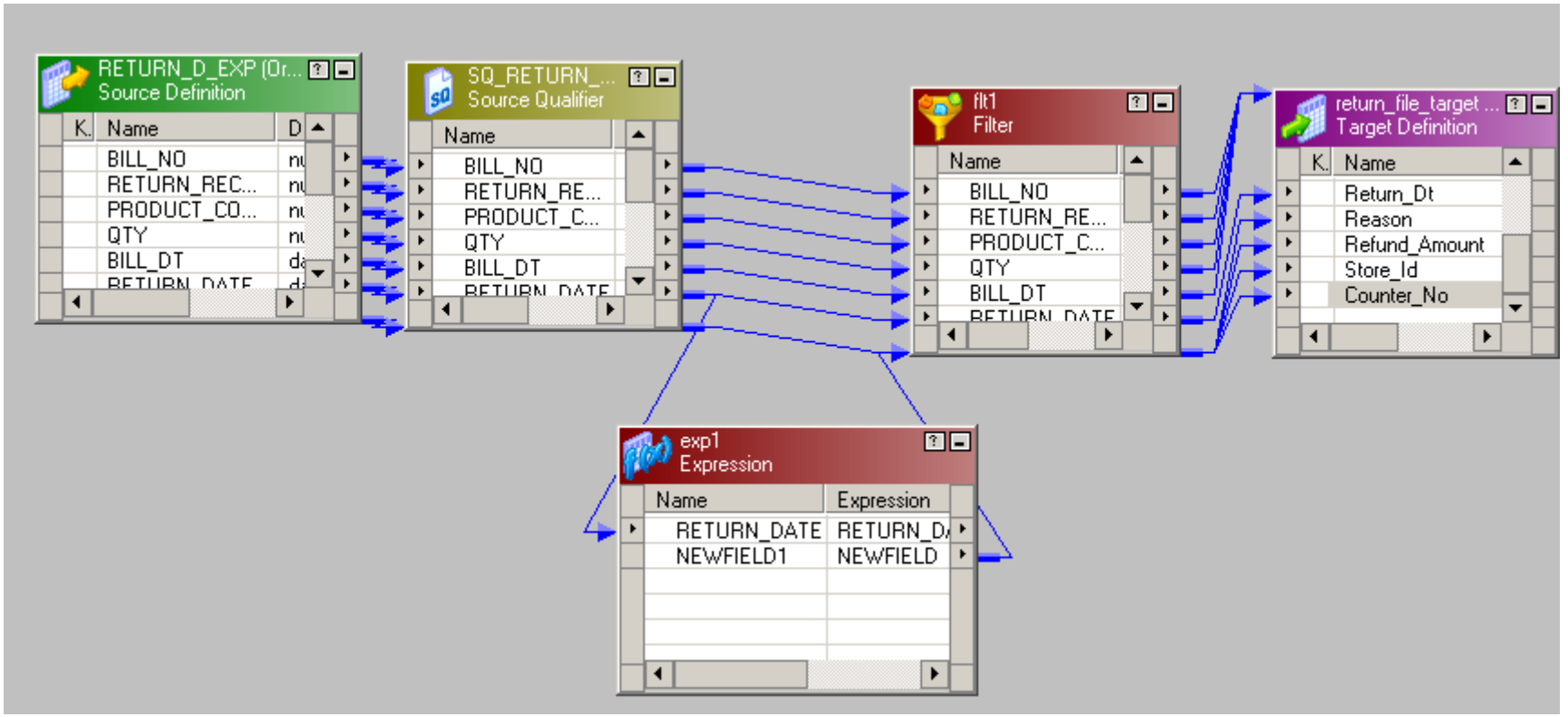
Loading product table using lookups



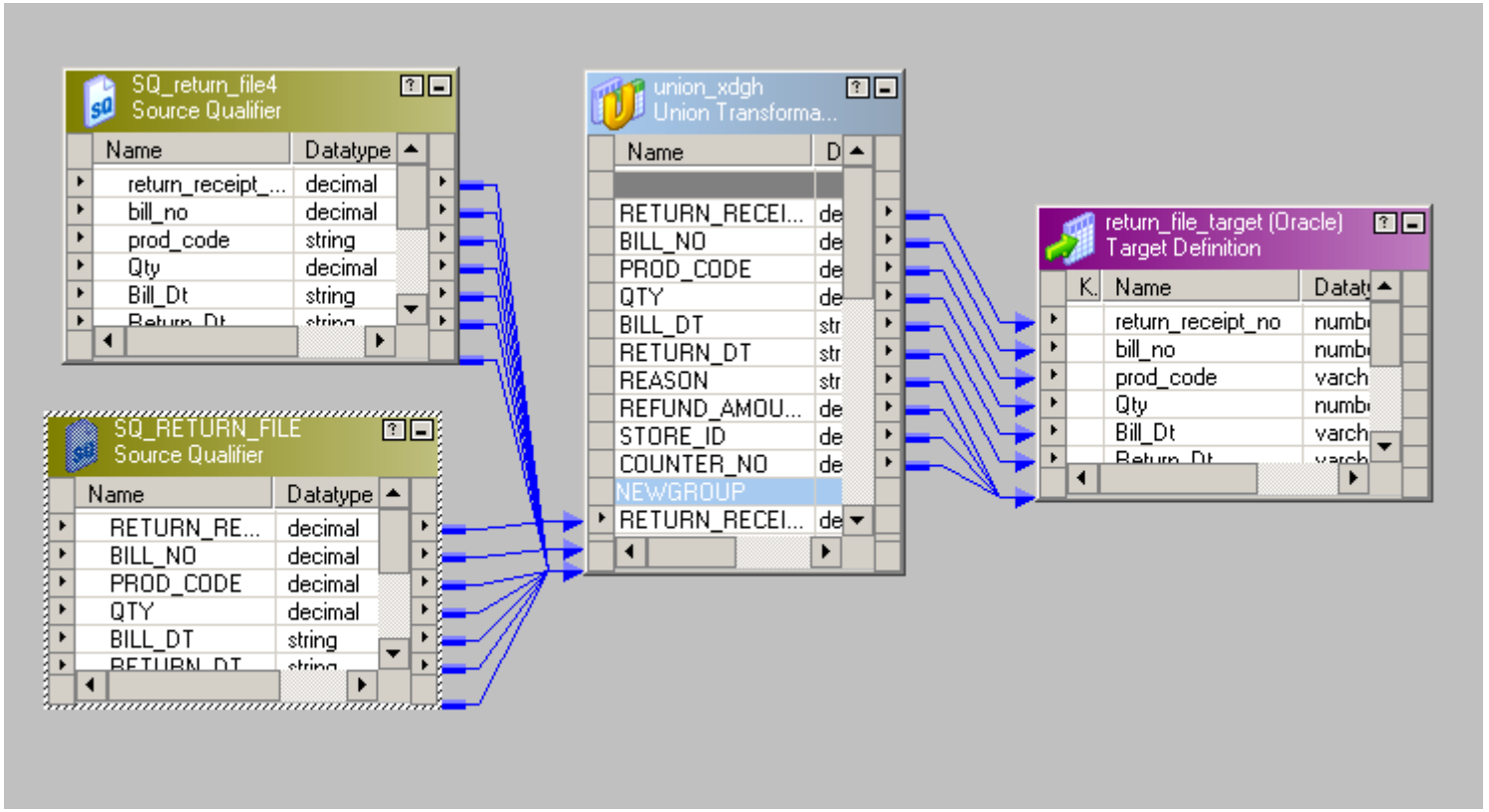
Loading product table using joins



Loading using one to one mapping



Loading using heterogeneous source



Test Cases (Informatica)

Test Case ID	Instance Name	Mapping Name	Source Success Rows	Source Failed Rows	Target Success Rows	Target Failed Rows	Total Transformation Errors	Status
TC_1	s_m_category_final	m_category_final	20	0	20	0	0	Succeeded
TC_2	s_m_brand_final	m_brand_final	80	0	80	0	0	Succeeded
TC_3	s_m_model_final	m_model_final	318	0	318	0	0	Succeeded
TC_4	s_m_date_dim	m_date_dim	3285	0	3285	0	0	Succeeded
TC_5	s_m_product_final	m_product_final	6081	0	6081	0	0	Succeeded
TC_6	s_m_return_final	m_return_final	128	0	128	0	0	Succeeded

Reports Generation

Reports Generation for fast analyzing of data

Reports Generation

We use Business Object

Benefits of Business Object

Real-Time Messaging

Guides Users

Enables Priority Access

Manages Qwery scheduling

Increase Reporting Accuracy

Delivers SQL Alerts

Tune Universes

Optimize Reports

Analyze Data Usage

Audit Data Usage

Audit for Compliance

Budget based on usage

Manage Service Levels

Reduce ETL Load Times

Improve Resource Efficiency

Reports Identified

1. Maximum Returned Products
2. Store wise Returned Product
3. Brand wise Returned Products
4. Yearly / Monthly / Weekly Returned Products

Test Cases (BO)

http://gauravpaliwal.com/maptestcase.html

Reports Analyzed

BO Reports :

http://inhydqcybipm01:8080/businessobjects/enterprise115/desktoplaunch/InfoView/logon/logon.do

Interactive Dashboard (Business Values):

http://gauravpaliwal.com/FusionCharts_Evaluation/Code/jquery/creatingcharts/

Problem Faced and Lesson Learnt

Problem : Session Related Error (Informatica)

Solution : Logout all sessions and follow naming convention

Problem Faced and Lesson Learnt

Problem : Flat File not found (Informatica)

Solution : The location of files are on the Server not on the local machine.

Problem Faced and Lesson Learnt

Problem : Divergence Problem (BO)

Solution : The database schema should be consistent.

Problem Faced and Lesson Learnt

Problem : Object not found (BO)

Solution : Database is inconsistent

Miscellaneous

Interactive Dashboards

Suggestions and Questions

Thank You