



MAULI SYSTEMS, INC.

By

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Mauli Systems, Inc.



Data Quality, Management and Data Certification

Data Quality and Management

- Data Quality, Accuracy and Management is such a broad and complex subject.
- There are many disparate systems and databases in today's enterprise.
- For variety of reasons there is no one enterprise system / application and a single database.

Data Quality and Management

- Cost of Inaccurate data is substantial.
- Everyone starts out blaming IT for data issues.
- However, data is created by people outside of IT and is used by people outside IT.
- IT is responsible for the quality and accuracy of the systems that move the data and store it.

Data Quality and Management

- Why Quality and Accuracy Data is important?
 - Accurate, Timely and Complete Data is necessary in today's enterprise.
 - Increase Trust on the systems/applications.
 - Business customer satisfaction.
 - Accurate Business Decisions.
 - Ensure Compliance.
 - Otherwise – Garbage in – Garbage out.

Data Quality and Management

- There is no one tool or solution to resolve all the Data issues.
- Successful Data Quality initiative starts with understanding the issues, the sources, the targets and the usage of the data, the processes, the resources etc..

Data Quality and Management

- Similar data is housed in multiple systems / databases, which also makes it a bigger challenge.

- Order / Invoice info including address and contact info

Order Entry
and Invoicing

- Replicated info and maintained separately
- No link with customer info directly with the OE&I system

Accounts
Receivable

- Replicated info and maintained separately
- No link with customer info directly with the OE&I or AR systems

Account
Payable

Data Quality and Management

- Each system house their own business rules.

- Order / Invoice info including address and contact info

Order Entry
and Invoicing

- Replicated info and maintained separately
- No link with customer info directly with the OE&I system

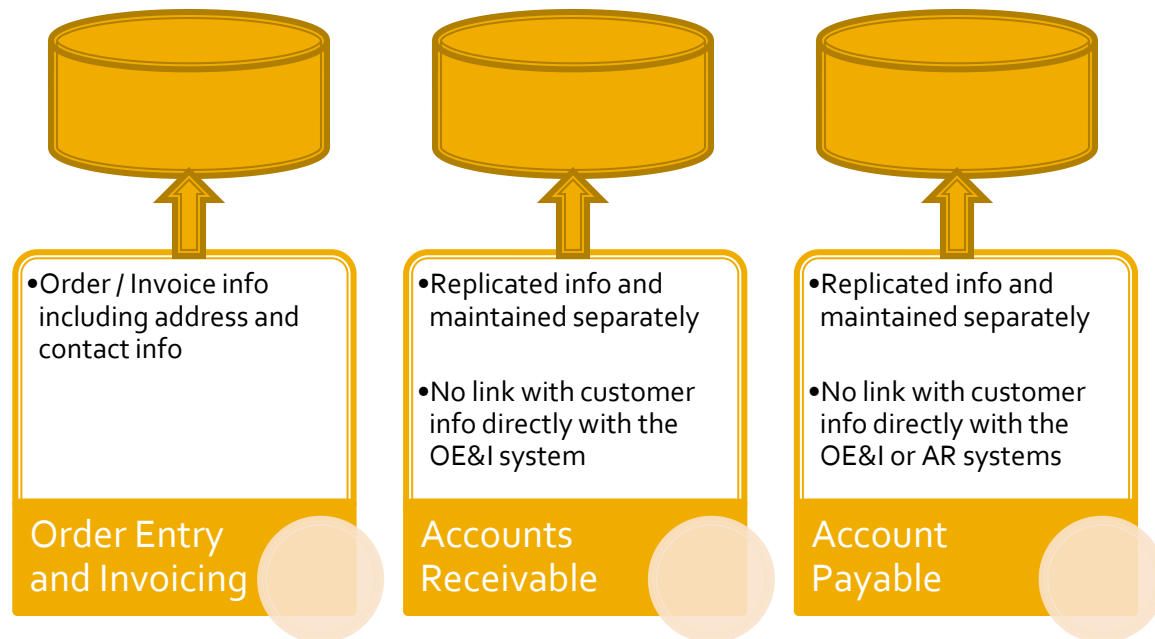
Accounts
Receivable

- Replicated info and maintained separately
- No link with customer info directly with the OE&I or AR systems

Account
Payable

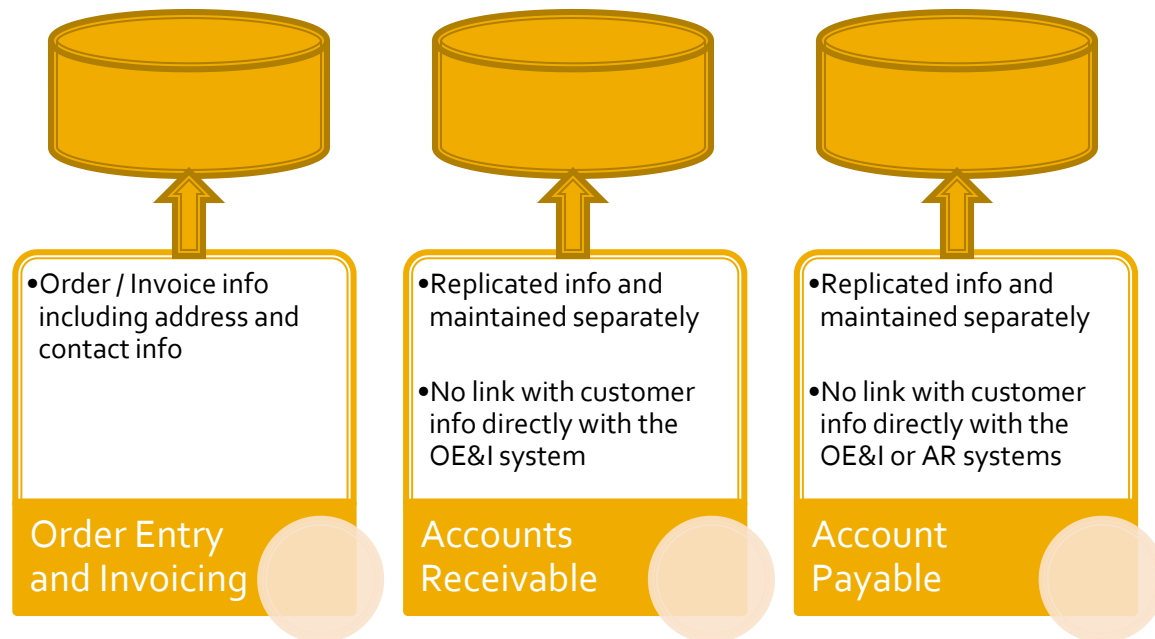
Data Quality and Management

- Many times these rules are within application code or in the middle layer and not at the database level, so there is a back door open.



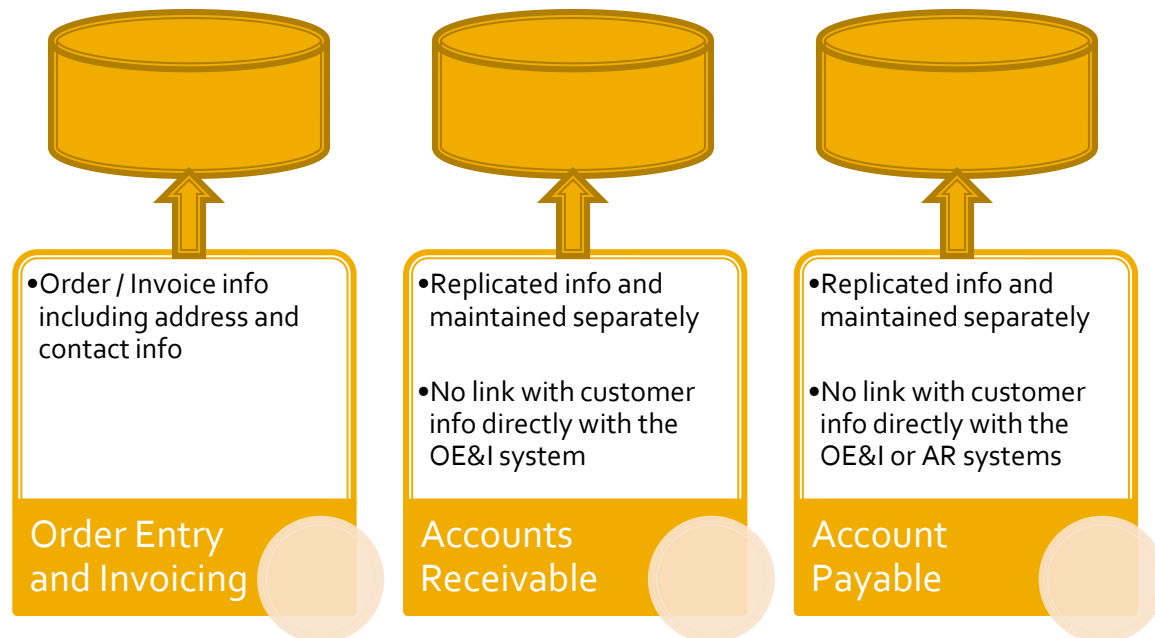
Data Quality and Management

- Enterprise mergers require merging systems / data which also causes data issues.



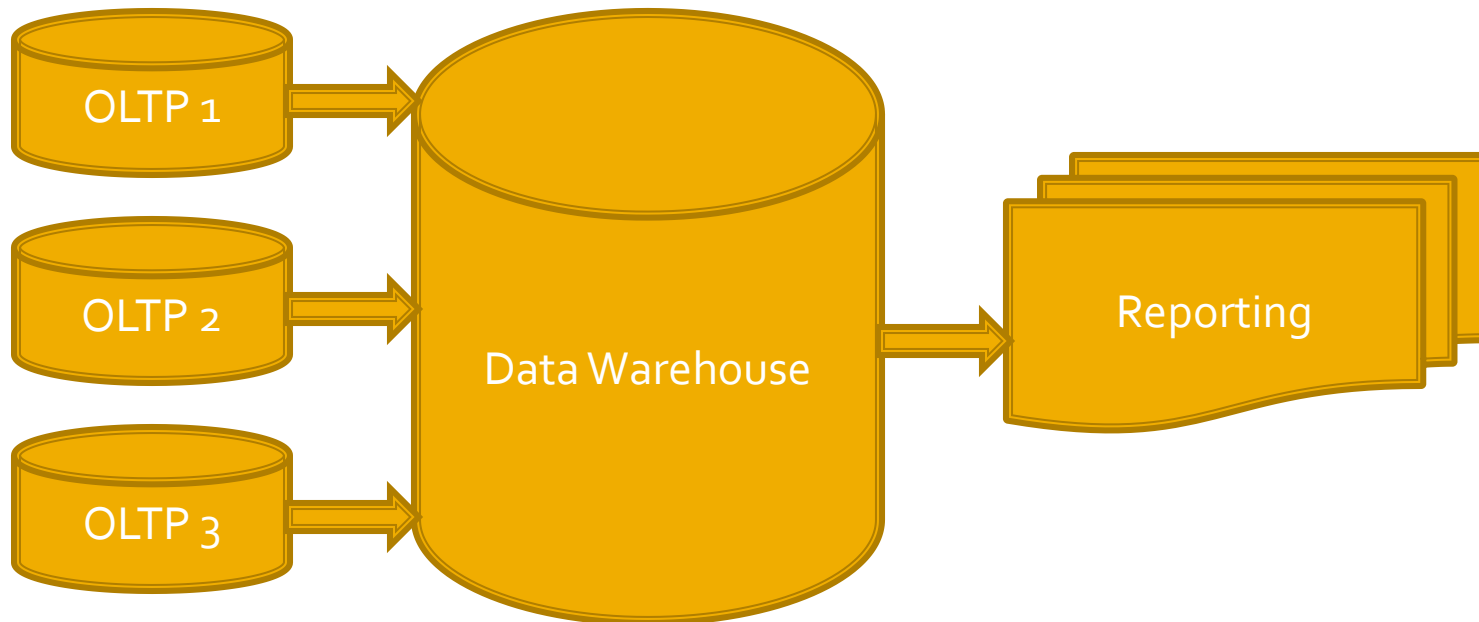
Data Quality and Management

- Many times you do not have control on many of the third party proprietary applications.
- Even for custom built applications where you have very much control of validation logic, you might still need some validation done outside of application on a regular basis.



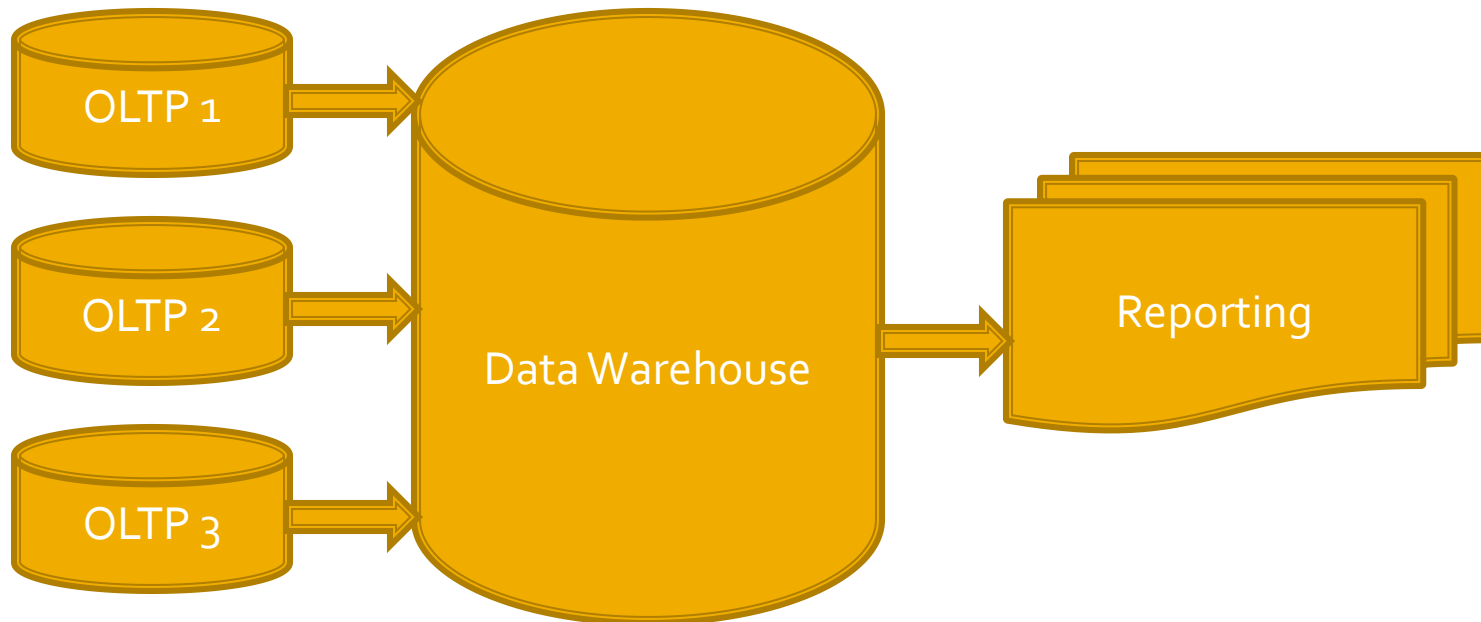
Data Quality and Management

- Data movement from one system to another system and / or to data warehousing, on a regular basis might also cause data discrepancies.



Data Quality and Management

- Redundant Processes are developed to load, enter and validate data.
- Validation/Business rules are embedded in each of these processes or often ignored.



Data Certification

- Data has to be validated in each system.
- Data has to be compared and balanced during each stage of data flow.
- Data flow should be stopped on “out of balance” condition, which are out of defined tolerance level.
- Discrepancies should be reported and appropriate actions should be taken.
- During the life cycle, accommodate changes of processes and business rules.

Data Certification

- Mauli Systems, Inc. has developed Data Certification System.
- Is an automated balancing system.
- Certify data between a source and a target.
- Source and Target could be two different databases, or applications, or disparate systems, just two tables/views within the same database, or External Data files.
- Typical usage is to certify the data during different stages of data flow.
- Allows enterprise to automatically capture and report discrepancies between a source and a target.

Data Certification

- Allows enterprise to stop the data flow, if there is any discrepancy.
- Has built in facility to define tolerance % at subject area level or tolerance value at the column level.
 - Typical use is to allow us to ignore rounding issues or known differences.
- Source and Target systems are compared using SQL queries.
- Queries can have five group by columns, ten summary columns and one count column.

Data Certification

- Has facility to define custom column names at Subject Area level, which are dynamically used in the reports.
- Queries are defined and compared at subject area level.
- Criteria is a group of related Subject Areas, and allows us to certify all in one execution.
- Different Criteria can be certified in parallel.
- Built in API is used to execute and certify a criteria.
- You can call API to certify a criteria within your data flow batch process or execute it from the front-end.
- Process and compare logs are stored in the database.
- Detailed discrepancy reports can be generated.

Data Certification

- One of our clients is using this software:
- To certify data flows in their Analysis & Reporting (A&R) environment.
- This includes data certification within their Daily, Weekly and Monthly batch cycles:
 - A&R Stage-in data with source OLTP systems.
 - A&R Historical ETL data with A&R Stage-in data.
 - Essbase Cubes data with A&R Stage-out data.

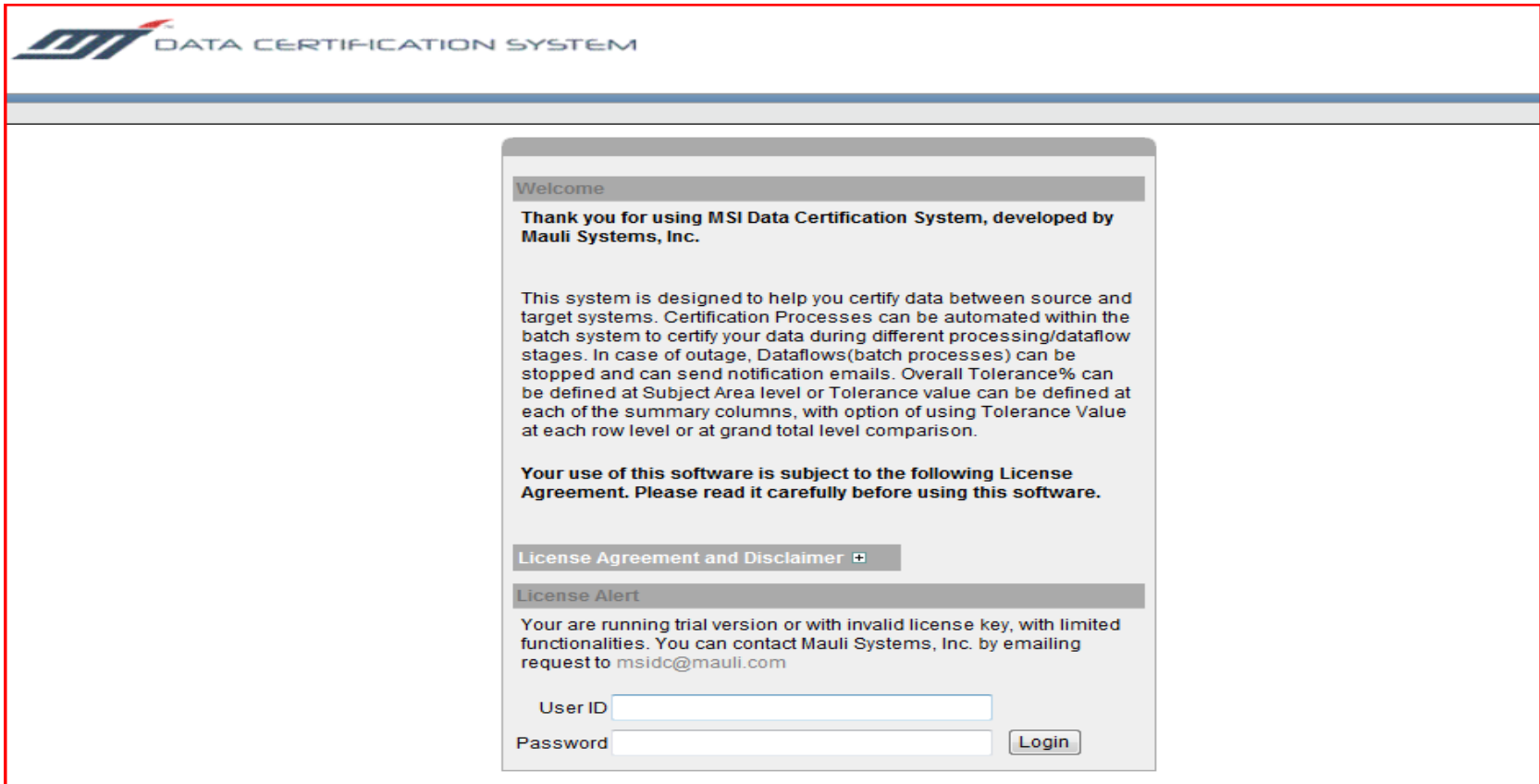
Data Certification


- During the daily cycle, they do not stop the data flow to avoid nightly support. Certification report is sent out in the morning to the support person.
- During monthly cycle, they stop the data flow, when there is any discrepancy, which is out side of the defined tolerances.
- Has captured many issues, stopped further data flow and avoided posting in-correct data to OLAP environment.
- They have defined 32 Criteria and 196 Subject Areas for A&R related data flows.

Data Certification

- They are also using this system to certify HFM (Hyperion Financial Module) related data flows
- This includes data certification of :
 - HFM (Hyperion Financial Module) Stage-in data with source systems such as AXSONE GL, Dynamics AX, PAM, Summit and few other OLTP systems
 - HFM Historical ETL data with HFM Stage-in data
 - HFM and AXSONE GL data with HFM Stage-out data.
- They stop the data flow, when there is any discrepancy, which is out side of the defined tolerances.
- This system has helped them to easily convince auditors on SOX compliance.
- There are 86 Criteria and 112 Subject Areas are defined in the system for HFM related data flows.

Data Certification - Logon




 DATA CERTIFICATION SYSTEM

Welcome

Thank you for using MSI Data Certification System, developed by Maui Systems, Inc.

This system is designed to help you certify data between source and target systems. Certification Processes can be automated within the batch system to certify your data during different processing/dataflow stages. In case of outage, Dataflows(batch processes) can be stopped and can send notification emails. Overall Tolerance% can be defined at Subject Area level or Tolerance value can be defined at each of the summary columns, with option of using Tolerance Value at each row level or at grand total level comparison.

Your use of this software is subject to the following License Agreement. Please read it carefully before using this software.

License Agreement and Disclaimer 

License Alert


Your are running trial version or with invalid license key, with limited functionalities. You can contact Maui Systems, Inc. by emailing request to msidc@mauli.com

User ID

Password

Data Certification – Certification Status

Maui Systems, Inc. Print Logout

 DATA CERTIFICATION SYSTEM

Certification | Admin | Security Admin

Certification | Certification Process |

Certification Status

Current Process Date: 16-JUL-2011


Rows 15

Certified ? = 'N'

Criteria Id	Criteria Description	Active Ind	Last Process Date	Certified ?	Process Log	History Log	SubjectArea Status
100101	Certify Data Warehouse with Order Entry Demo1	Y	16-JUL-2011	N	Process Log	History Log	SubjectArea Status & Discrepancies
100102	Certify Data Warehouse with Order Entry Demo2	Y	16-JUL-2011	Y	Process Log	History Log	SubjectArea Status & Discrepancies
100103	Certify Data Warehouse with Order Entry Demo3	Y	16-JUL-2011	Y	Process Log	History Log	SubjectArea Status & Discrepancies

1-3

Data Certification – Company Info

 DATA CERTIFICATION SYSTEM Mauli S

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |


Company Information > **Edit Company Information**

Edit Company Information Cancel Apply Changes

Drop Demo Objects

<p>* Company Name <input type="text" value="Your Company Name"/></p> <p>* Company Address <input type="text" value="Your Company Address"/></p> <p>* Application Title <input type="text" value="Automated Balancing System"/></p> <p>* Validate Email Address? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>* Warning Message <input type="text" value="WARNING: Out of Balance condition must be investigated."/></p> <p>* Current Process Date <input type="text" value="16-JUL-2011"/> <input type="button" value="Calendar"/></p> <p>* Administrator's Name <input type="text" value="Kashyap"/></p> <p>* Auto Purge Log? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>DB Host Name <input type="text" value="msi-srv02"/></p> <p>License Key <input type="text"/></p>	<p>Phone <input type="text" value="Phone# for the company"/></p> <p>Fax <input type="text" value="Fax# for the company"/></p> <p>* Application URL <input type="text"/></p> <p>* Keep only Latest Logs for a Process Date? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>* Style Sheet <input type="text" value="<style type='text/css'>\nbody {font-family : Verdana, Arial;\n background-color: #d0e4fe;\n font-size : 10pt;}\nb.green { color : #00AA00;"/></p> <p>* Autoset Current Process Date? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>* Administrator's Email <input type="text" value="msidc@mauli.com"/></p> <p>* Log Retention Days <input type="text" value="0"/></p> <p>DB Name <input type="text" value="XE"/></p>
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Data Certification – Certification/Balancing Levels

 DATA CERTIFICATION SYSTEM

Mauli Systems, Inc. Print Logout

Certification Admin Security Admin

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas

Edit Certification Levels

Cancel Submit

Level Id ▲	Default Level Title	Custom Criteria Level Title	Custom Subarea Level Title	Consider As
1	Balanced (there were no activities)	Balanced (No Activity)	Balanced (No Activity)	Success
2	Balanced	BALANCED	BALANCED	Success
3	Balanced (within defined tolerance levels)	BALANCED (UNDER TOLERANCE LEVEL	BALANCED (UNDER TOLERANCE LEVEL	Warning
4	Does Not Balance (Ignore)	DOES NOT BALANCE - Ignore and Contin	DOES NOT BALANCE - Ignore and Contin	Warning
5	Does Not Balance	DOES NOT BALANCE	DOES NOT BALANCE	Failure

1 - 5

These are fixed Certification Levels. You could customize the titles as you like for Criteria and Subject-Area levels for reporting. Currently "Consider As" is either Success, Warning or Failure, and are pre-defined at the Certification Level, which should not be modified.

You can override certification level for NO ACTIVITY at Subject Area level. This way if you like to consider NO ACTIVITY as DOES NOT BALANCE condition and make it as failure you could by overwriting.

Data Certification – Source and Target Applications

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DATA CERTIFICATION SYSTEM

Certification Admin Security Admin


Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |

List of Systems

Systems to Certify

Edit	System Code ▲	System Description	Active ?
	DMODW	Demo Data Warehousing.	Y
	DMOOE	Demo Order Entry System.	Y
			1-2

Data Certification – Criteria

 DATA CERTIFICATION SYSTEM

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |
List of Certification Criteria > **Create/Edit Certification Criteria**

Certification Criteria Cancel Delete Apply Changes

Criteria # 100101

* Criteria

* Target System to Certify

* Source Systems to Certify with

Message If Does Not Balance

How Would You Resolve?

Send Process Log to Email

Send Compare Log to Email

Send Compare Log Email On-Success? Yes No


Send Compare Log Email On-Warning? Yes No

Send Compare Log Email On-Failure? Yes No

* Active ?

Data Certification – Subject Areas

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DATA CERTIFICATION SYSTEM

Certification Admin Security Admin

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |


List of Subject-Areas

Please Select Criteria:

	Criteria Id	Subject Area Id	Subject Area	Subject Area Desc	Stop ?	Tolerance %	Active ?	Queries	Titles And Tolerances
	100101	100901	OrderAmtByCustomer	Check Order Amount by Customer.	Y	0.0000	Y	Queries	Column Titles and Tolerances
	100101	100904	OrderAmtByPeriod	Check Order Amount by Period.	Y	0.0000	Y	Queries	Column Titles and Tolerances
	100101	100905	OrderAmtByProduct	Check Order Amount by Product Code.	Y	0.0000	Y	Queries	Column Titles and Tolerances

1-3

Data Certification – Subject Area

 DATA CERTIFICATION SYSTEM

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |

List of Subject-Areas > Create/Edit Subject-Areas

Certification Subject-Areas Cancel Delete Apply Changes

* Criteria ID

* Subject Area

* Subject Area Description

* Purpose

* Stop Processing If Does Not Balance Yes No

Message If Does Not Balance

How Would You Resolve?

* Tolerance %

* Consider "NO ACTIVITY" as

* Active?

Data Certification – Target and Source System Queries

Maui Systems, Inc. Pr

DATA CERTIFICATION SYSTEM

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |

List of Subject-Areas > [Edit Subject-Areas Queries](#)

Certification Subject-Areas Queries

Cancel Apply Changes

- * Criteria Num 100101
- * Criteria Description Certify Data Warehouse with Order Entry Demo1
- * Subject Area OrderAmtByCustomer
- * Target System Query
- * Source System Query

```
Select
substr(a.CUSTOMER_NAME,1,30) grp01,
.. grp02,
.. grp03,
.. grp04,
.. grp05,
nvl(sum(a.Order_Amount),0) sum01,
0 sum02,
0 sum03,
0 sum04,
0 sum05,
0 sum06,
0 sum07,
0 sum08,
0 sum09,
0 sum10,
count(*) count
from msi_demo_dw_v_etl_ord_details a
-- you can also use db links, views etc..
group by substr(a.CUSTOMER_NAME,1,30)
```

597 of 32000

```
Select
substr(a.CUSTOMER_NAME,1,30) grp01,
.. grp02,
.. grp03,
.. grp04,
.. grp05,
nvl(sum(a.Order_Amount),0) sum01,
0 sum02,
0 sum03,
0 sum04,
0 sum05,
0 sum06,
0 sum07,
0 sum08,
0 sum09,
0 sum10,
count(*) count
from msi_demo_OLTP_v_ord_details a
-- you can also use db links, views etc..
group by substr(a.CUSTOMER_NAME,1,30)
```


595 of 32000

Please define query with first five columns as group by, then ten summary columns and then a count column.

NOTE:

- 1) Maximum length for group by column value is 1000 characters, so please use SUBSTR, if the values are larger than 1000 characters.
e.g. nvl(SUBSTR(column_name, 1, 1000), '') or null when column is not used.
- 2) Nulls are allowed. Null values are converted to 'NULL' during compare. However, we recommend to define atleast zero for number/summary columns.
e.g. nvl(column_name, 0) or just 0 when column is not used.

Data Certification – Custom Column Level Titles and Tolerances

 DATA CERTIFICATION SYSTEM

Admin | Certification Levels | Certification Systems | Certification Criteria | Certification Subject Areas |
List of Subject-Areas > Edit Column Titles and Tolerances

Edit Titles and Tolerances Cancel Apply Changes

* Criteria Num 100101
Criteria Description Certify Data Warehouse with Order Entry Demo1
* Subject Area OrderAmtByCustomer

Group Column01 Title	<input type="text" value="Customer Name"/>	
Group Column02 Title	<input type="text"/>	
Group Column03 Title	<input type="text"/>	
Group Column04 Title	<input type="text"/>	
Group Column05 Title	<input type="text"/>	
Summary Column01 Title	<input type="text" value="Order Amount"/>	Is the Tolerance for Row Level? <input checked="" type="radio"/> Yes <input type="radio"/> No
Summary Column02 Title	<input type="text"/>	Summary Column01 Tolerance <input type="text"/>
Summary Column03 Title	<input type="text"/>	Summary Column02 Tolerance <input type="text"/>
Summary Column04 Title	<input type="text"/>	Summary Column03 Tolerance <input type="text"/>
Summary Column05 Title	<input type="text"/>	Summary Column04 Tolerance <input type="text"/>
Summary Column06 Title	<input type="text"/>	Summary Column05 Tolerance <input type="text"/>
Summary Column07 Title	<input type="text"/>	Summary Column06 Tolerance <input type="text"/>
Summary Column08 Title	<input type="text"/>	Summary Column07 Tolerance <input type="text"/>
Summary Column09 Title	<input type="text"/>	Summary Column08 Tolerance <input type="text"/>
Summary Column10 Title	<input type="text"/>	Summary Column09 Tolerance <input type="text"/>
Count Title	<input type="text" value="Count of Order Lines"/>	Summary Column10 Tolerance <input type="text"/>
		Count Tolerance <input type="text"/>

Data Certification – Certify a Criteria



Certification | Certification Process |

Certification Process

Current Process Date:

Please Select Criteria:

Status : DOES NOT BALANCE

Subject Areas

Subject Area ▲	Note	Latest Status	Active Ind
OrderAmtByCustomer	-	BALANCED	Y
OrderAmtByPeriod	-	DOES NOT BALANCE	Y
OrderAmtByProduct	-	DOES NOT BALANCE	Y
			1 - 3

[Information on how to call this process from batch system](#) +

Data Certification – Process and Compare Log

The screenshot displays the 'DATA CERTIFICATION SYSTEM' interface. The top navigation bar shows 'Certification Process > Criteria Processing and Certification Log'. The main window is titled 'Criteria Processing and Certification Log' and contains the following information:

- Process ID 2
- Criteria ID 100101
- Criteria Description Certify Data Warehouse with Order Entry Demo1
- Process Date 16-JUL-2011

The 'Process Log' section shows a table of processing queries:

Processing Query	Subject Area	Time
Processing Query1 for :	OrderAmtByCustomer Subject Area	at 22:16:03
Processing Query2 for :	OrderAmtByCustomer Subject Area	at 22:16:03
Processing Query1 for :	OrderAmtByPeriod Subject Area	at 22:16:03

The 'Compare Log' section shows the following details:

- Criteria : Certify Data Warehouse with Order Entry Demo1 for 16-JUL-2011
- Subject Area : OrderAmtByCustomer
- Purpose : Sample for "BALANCED"
- Status : **BALANCED**

At the bottom of the interface, there are two status indicators: 'Queries Processed ? Y' and 'Criteria Certified ? N'.

Data Certification – Process Log Email

Subject: MSIDC(XE) 2011-07-16 Process Log for Criteria (100101) Certify Data Warehouse with Order Entry Demo1

**Company Name : Your Company Name
Data Certification Processing Log**

Program execution started on 16-JUL-2011 at 22:16:03

Criteria : (100101)	Certify Data Warehouse with Order Entry Demo1	
Process Date :	16-JUL-2011	
Processing Query1 for :	OrderAmtByCustomer Subject Area	at 22:16:03
Processing Query2 for :	OrderAmtByCustomer Subject Area	at 22:16:03
Processing Query1 for :	OrderAmtByPeriod Subject Area	at 22:16:03
Processing Query2 for :	OrderAmtByPeriod Subject Area	at 22:16:03
Processing Query1 for :	OrderAmtByProduct Subject Area	at 22:16:03
Processing Query2 for :	OrderAmtByProduct Subject Area	at 22:16:03

Program execution completed on 16-JUL-2011 at 22:16:03

Data Certification – Compare Log Email

Subject: MSIDC(XE) 2011-07-16 Compare Log for Criteria (100101) Certify Data Warehouse with Order Entry Demo1

**Company Name : Your Company Name
Data Certification Compare Log**

Criteria : Certify Data Warehouse with Order Entry Demo1 for 16-JUL-2011

Subject Area : OrderAmtByCustomer

Purpose : Sample for "BALANCED"

Status : BALANCED

Subject Area : OrderAmtByPeriod

Purpose : To make sure data warehouse is matching Order Amount with Order Entry System, immediately after refresh of Data Warehouse.

Status : DOES NOT BALANCE

Order Amount in Data Warehouse does not match with Order Entry System.

Discrepancies for OrderAmtByPeriod (Tolerance % :) [Discrepancy Report](#)

Column Title	Order Amount
Total Value in DMODW	9551854
Total Value in DMOOE	9604190.61
Difference of	52336.61
Tolerance Value	

Column Title	Count of Order Lines
Total Value in DMODW	2996
Total Value in DMOOE	3025
Difference of	29
Tolerance Value	

Data Certification – Compare Log Email

Subject Area : OrderAmtByProduct

Purpose : To make sure data warehouse is matching Order Amount with Order Entry System, immediately after refresh of Data Warehouse.

Status : DOES NOT BALANCE

Order Amount in Data Warehouse does not match with Order Entry System.

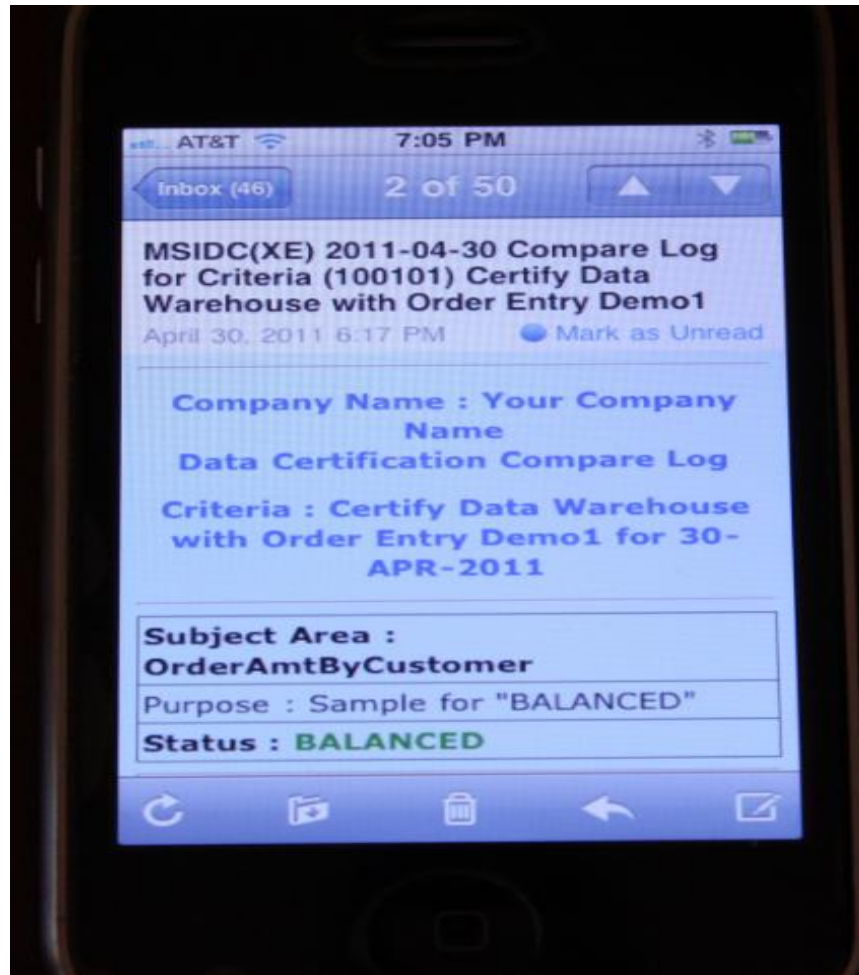
Discrepancies for OrderAmtByProduct (Tolerance % :) [Discrepancy Report](#)

Column Title	Order Amount
Total Value in DMODW	9551854
Total Value in DMOOE	9604190.61
Difference of	52336.61
Tolerance Value	

Certify Data Warehouse with Order Entry Demo1 : DMODW DOES NOT BALANCE with DMOOE, for the date 16-JUL-2011.

Data Warehouse values are not matching with the Order Entry System. This must be investigated immediately.

Data Certification – Compare Log Email on Smart Phone



Data Certification – Subject Area Status



Certification | Certification Process |

Certification Status > **SubjectArea Status**

SubjectArea Status

Cancel

Criteria #: 100101

Criteria Description: Certify Data Warehouse with Order Entry Demo1

Process Date: 16-JUL-2011

Process ID: 2

Target System to Certify: DMODW - Demo Data Warehousing.

Source System to Certify With: DMOOE - Demo Order Entry System.

Subject Area Id ▲	Subject Area	Note	Certification Status	Certified ?	Discrepancies
100901	OrderAmtByCustomer		BALANCED	Y	
100904	OrderAmtByPeriod		DOES NOT BALANCE	N	Discrepancies
100905	OrderAmtByProduct		DOES NOT BALANCE	N	Discrepancies

1 - 3

Data Certification – Discrepancy Report

Certification | Certification Process |

Certification Status > SubjectArea Status > **Discrepancy Report**

Cancel

Criteria #: 100101 Criteria Description: Certify Data Warehouse with Order Entry Demo1 Include Discrepancies Under Tolerance? Yes No

Subject Area Id: 100904 Subject Area: OrderAmtByPeriod Include Missing In Target System? Yes No

Process ID: 2 Process Date: 16-JUL-2011 Include Missing In Source System? Yes No

Discrepancy Report

Order Year-MM	Group 02	Group 03	Group 04	Group 05	Row Description	Order Amount	Summary 02	Summary 03	Summary 04	Summary 05	Summary 06	Summary 07	Summary 08	Summary 09	Summary 10	Count of Order Lines
2003-01					1. DMODW Values:	118127	0	0	0	0	0	0	0	0	0	39
2003-01					2. DMOOE Values:	118692.77	0	0	0	0	0	0	0	0	0	40
2003-01					3. Difference :	-565.77	0	0	0	0	0	0	0	0	0	-1
2003-01					4. Tolerance :	0	0	0	0	0	0	0	0	0	0	0
2003-02					1. DMODW Values:	127642	0	0	0	0	0	0	0	0	0	41
2003-02					2. DMOOE Values:	128403.64	0	0	0	0	0	0	0	0	0	42
2003-02					3. Difference :	-761.64	0	0	0	0	0	0	0	0	0	-1
2003-02					4. Tolerance :	0	0	0	0	0	0	0	0	0	0	0


row(s) 1 - 8 of 116 Next ▶

Download to Excel

Exists in One System and Missing in other System

No discrepancy found.

Data Certification - Authorization




 DATA CERTIFICATION SYSTEM

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[Certification](#) [Admin](#) [Security Admin](#)

Security Admin | [Change Password](#) |

Manage Users

<input type="checkbox"/>	User Name	User Login ID	User Information	Expires On	User Role
<input type="checkbox"/>	<input type="text" value="Admin Name"/>	<input type="text" value="msidc_admin"/>	<input type="text" value="MSIDC Administrator"/>	<input type="text"/> 	Administrator ▾
<input type="checkbox"/>	<input type="text" value="Operator Name"/>	<input type="text" value="msidc_ops"/>	<input type="text" value="MSIDC Operations Account"/>	<input type="text"/> 	Operations ▾
<input type="checkbox"/>	<input type="text" value="ReadOnly User Name"/>	<input type="text" value="msidc_ro"/>	<input type="text" value="MSIDC ReadOnly Account"/>	<input type="text"/> 	Reader ▾

1-3

Note:
When your authorization scheme is based on Database Account, you must enter a valid database user id in User Login ID.
Administrator has full access to this system.

FAQs:

- What is Hardware and Software requirements?
 - Data Certification Systems is built using Oracle Application Express and Oracle Back-end.
 - Oracle 10g and Higher on any platform.
 - If it is a simple environment then it can run on Oracle XE.

FAQs:

- Can this software be used to certify non-oracle data?
 - Yes.
 - Our client has used to source the data from SQL Server using Oracle Transparent Gateways.
 - You can source data in any of XLS, CSV or XML formats, utilizing either external table feature, XML feature in Oracle database or Linked Server feature in SQL Server.

FAQs:

- What is involved in configuring this system?
 - Once necessary Oracle software is installed, it is matter of importing this application.
 - We can provide you on-site/off-site consulting to implement this system and train your employees.
 - You will need one administrator with strong knowledge of SQL.

Summary

- There is no one low cost solution.
 - MDM can be used. We can build custom MDM solution.
 - Activity Monitoring, Data Issues Monitoring, Cross system monitoring and Notifications to the right people and at the right time is very important, where we recommend SSRS.
 - Data Certification during each stage of the data flow or cross system data certification. We recommend MSI Data Certification Software.
 - Certain situation might need a custom solution, where we can also provide low cost solution.

Summary

- We can visit you and discuss all these scenarios and solutions as well give you the demo of our Data Certification Software.
- For more information please contact Info@mauli.com.

Q&A
