# About the presenter

» Implementing Oracle Payroll for over 20 years

» Implemented the 3$^{rd}$ US Payroll site to go live in 1997

» This is my 3$^{rd}$ Oracle Cloud Payroll implementation

» Frequent OHUG, OAUG and Open World Presenter, mostly on Fast Formula solutions

# Agenda

» Introductions
» YRC HCM project
» YRC challenges
- Timecard transformations
- Payslip customizations
- Local employer taxes
» Fast formula features
- Basic features
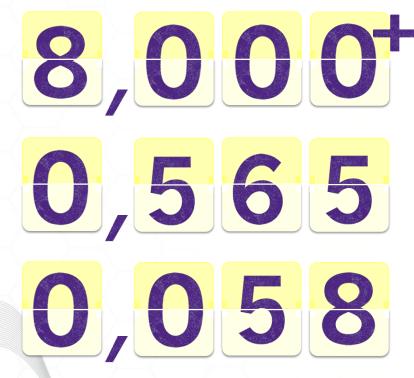- Working storage
- Arrays
- Looping
» Q&A

**YRCW provides services under a portfolio of four operating companies**

Collectively, we have approximately 20 - 25% of the public carrier market by tonnage. We provide the broadest coverage and more service capability throughout North America than any competitor. To put it simply, customers tell us where they want their freight to go and when it needs to be there, and we take it there; we carry the economy

# About Grant Thornton

We are the U.S. member firm of Grant Thornton International, a global organization of member firms providing audit, tax and advisory services to clients for more than 90 years.

**8,000+**

**0,565**

**0,058**

Over **10%** revenue growth in the U.S. last year with a **13%** increase in headcount

**$1.56bn** revenues

- **35%** of the companies on the 2015 Fortune 1000 list
- **39%** of the companies on the 2015 Fortune 500 list
- **54%** of the companies on the 2015 Fortune 100 list
- **25%** of the companies on the Russell 2000 list

ACCOUNTING 50 VAULT RANKING

WORKING MOTHER 100 BEST COMPANIES 2014

Winner 2015 INTERNATIONAL Accounting

MPF Awards For Management Excellence 2014 Winner Best managed international firm Grant Thornton An instinct for growth

MPF Awards For Management Excellence 2015 Winner Best Programme for Leadership Development

# Committed Oracle partner


Specialized Partner of the Year, 2014 (EPM, NA)


JD Edwards Excellence Award, 2015


Excellence Award, 2015 (Fusion Middleware Innovation at Serta Simmons Bedding)


JD Edwards Excellence Award, 2016

**ORACLE** Platinum Partner
Specialized
Data Warehousing

**ORACLE** Platinum Partner
Specialized
Oracle Business Intelligence Applications

**ORACLE** Platinum Partner
Specialized
JD Edwards EnterpriseOne Financial Management

**ORACLE** Platinum Partner
Specialized
Oracle Fusion Human Capital Management

**ORACLE** Platinum Partner
Specialized
Oracle Business Intelligence Foundation

**ORACLE** Platinum Partner
Specialized
Oracle E-Business Suite Financial Management

**ORACLE** Platinum Partner
Specialized
Oracle E-Business Suite Human Capital Management

**ORACLE** Platinum Partner
Specialized
Oracle Fusion Human Capital Management

**ORACLE** Platinum Partner
Specialized
Oracle E-Business Suite Supply Chain Management

**ORACLE** Platinum Partner
Specialized
Oracle Essbase

**ORACLE** Platinum Partner
Specialized
PeopleSoft Human Capital Management

**ORACLE** Platinum Partner
Specialized
Oracle Business Intelligence Foundation Suite 11g

**ORACLE** Platinum Partner
Specialized
Oracle Hyperion Financial Management

**ORACLE** Platinum Partner
Specialized
Oracle Hyperion Planning

**ORACLE** Platinum Partner
Specialized
PeopleSoft Enterprise Financial Management

**ORACLE**
Validated Integration
Oracle Healthcare

2014 Winner — ORACLE Oracle Excellence Award
SPECIALIZED PARTNER OF THE YEAR —NORTH AMERICA

2015 Winner — ORACLE Oracle Excellence Award

ORACLE Platinum Partner
Cloud Select
North America

# HCM areas of focus

**Intelligence**

| HR analytics and reports |
|---|

**Talent management**

| Talent acquisition | Transitions / onboarding | Compensation |
|---|---|---|
| Goals / performance management | Succession / talent review | Learning management |

**Self service**

| Self service HR |
|---|

**Workforce management**

| Payroll | HRMS (Core HR) |
|---|---|
| Time & labor (Kronos) | Time & labor (Other) |

# Challenges

» **Timecard transformations**
- Standard fast formula type to support timecard transformations
- Designed for simple mapping and file parsing
- Attempted to apply complicated business rules during transformation
- Union override rate issue
- Formula worked, but long run time
- Developed pre processor using PL/SQL
- Possible PAAS future application

# Challenges

» Payslip customizations

- Driver summary on Payslip
- Created information elements to capture detail
- Sent from timekeeping systems
- Added to archive (manage enterprise HCM information)
- Modified Payslip template

| DATE | | DISPATCH | EQUIP. | DRIVER | | TOUR | MILES | HOURS | RATE | WAGE | | DELAY |
| MO. | DAY | IDENTIFICATION NBR. | | ORIG. | DEST. | | | | | EXTENSION | | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 07 | 347-1285412 | 2DP | R67 | 347 | 1 | 251 | | .48310 | 121 | 26 | |
| 5 | 07 | 347-1283556 | 2DP | 347 | R67 | 1 | 251 | | .48310 | 121 | 26 | |
| 5 | 07 | | | | | 1 | | .50 | 19.2398 | 9 | 62 | WAIT EQ REP |
| 5 | 08 | 347-1294708 | 2DP | R67 | 347 | 2 | 251 | | .48310 | 121 | 26 | |
| 5 | 08 | 347-1290306 | 2DP | 347 | R67 | 2 | 251 | | .48310 | 121 | 26 | |
| 5 | 09 | 347-1302638 | 2DP | R67 | 347 | 3 | 251 | | .48310 | 121 | 26 | |
| 5 | 09 | 347-1304448 | 2DP | 347 | R67 | 3 | 251 | | .48310 | 121 | 26 | |
| 5 | 09 | | | | | 3 | | .25 | 19.2398 | 4 | 81 | WAIT D/H |
| 5 | 10 | 347-1312418 | 2DP | R67 | 347 | 4 | 251 | | .48310 | 121 | 26 | |
| 5 | 11 | 347-1320704 | 2DP | 347 | R67 | 4 | 251 | | .48310 | 121 | 26 | |
| 5 | 11 | 347-1321151 | 2DP | R67 | 347 | 5 | 251 | | .48310 | 121 | 26 | |
| 5 | 11 | | | | | 5 | | .50 | 19.2398 | 9 | 62 | ENRT FUEL |
| 5 | 12 | 347-1334106 | 2DP | 347 | R67 | 5 | 251 | | .48310 | 121 | 26 | |
| 5 | 12 | 347-1334033 | 2DP | R67 | 347 | 6 | 251 | | .48310 | 121 | 26 | |
| 5 | 13 | 347-1342221 | 2DP | 347 | R67 | 6 | 251 | | .48310 | 121 | 26 | |
| B4 | | | | MEALS/LODGINGS | | | | 0.00 | | 1479 | 17 | |
| TOUR COUNT | | 6 | | TOTAL MILES | | | 3012 | | | | | |

# Element Summary: LH Miles

**Primary Classification**   Information

**Reporting Name**   LH Miles

**Legislative Data Group**

\* **Effective As-of Date**

## Element Overview

Actions ▼   View ▼

- LH Miles
  - Input Values
    - Amount
    - Periodicity
    - Full-Time Equivalent
    - Hours
    - Rate
    - Dispatch ID
    - Equip Type
    - Origin
    - Destination
    - Trip
    - Miles
    - Tours
    - Tours Sleeper
    - Trip Date

## Element Details

**Element Name**   LH Miles

**Primary Classification**   Information

**Secondary Classification**

**Category**   Standard

### ▲ Standard Rules

**Recurring entry**   Nonrecurring

**Employment Level**   Assignment level

___ Balance adjustments only

___ Closed for entry

___ Accept results from formulas only

# Global Payroll Element Information to Archive

View ▾    Format ▾    ➕    ✖    ▦    🗐    ⬚ Freeze    ⬚ Detach    ⬌ Wrap

| * Legislative Data Group Name | * Element | * Input Value 1 | Input Value 2 | Input Value 3 | Input Value 4 | Input Value 5 |
|---|---|---|---|---|---|---|
| United States LDG | LH Miles | Hours | Amount | Rate | Dispatch ID | Equip Type |
| United States LDG | LH Event Review | Hours | Amount | Rate | Dispatch ID | Equip Type |
| United States LDG | LH Linens | Hours | Amount | Rate | Dispatch ID | Equip Type |
| United States LDG | LH Meal and Lodge | Hours | Amount | Rate | Dispatch ID | Equip Type |
| United States LDG | LH Misc Enroute | Hours | Amount | Rate | Dispatch ID | Equip Type |
| United States LDG | LH Impassable Highway | Hours | Amount | Rate | Dispatch ID | Equip Type |

**YRC Worldwide**

P/E 10/8/16 Hire Date 4/8/96

**YRC FREIGHT
ROAD DRIVER'S PAYROLL
SUMMARY**

| DATE | | DISPATCH IDENTIFICATION | | DRIVER | | | | | | WAGE | |
| MM | DD | NBR. | EQUIP. | ORIG. | DEST. | TOUR | MILES | HOURS | RATE | EXTENSION | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 02 | 8302763318 | 2DP | 830 | 875 | 1 | 1020 | | 0.27508 | 280.58 | LH Miles |
| 10 | 02 | | | | | 1 | | 3.50 | 21.37750 | 74.82 | LH Wait Equipment Repair |
| 10 | 04 | | | | | 2 | | 1.00 | 21.37750 | 21.38 | LH Enroute Fuel |
| 10 | 04 | 8752771425 | 2DP | 875 | 813 | 2 | 650 | | 0.27508 | 178.80 | LH Miles |
| 10 | 04 | 8132793156 | 2DP | 813 | 830 | 2 | 374 | | 0.27508 | 102.88 | LH Miles |
| 10 | 04 | | | | | 2 | | 2.00 | 21.37750 | 42.76 | LH Wait Drop and Hook |

<?template:Payslip_GLB_subt_EmpInfo?>

| Employee Name | Person Number | Payroll Relationship Number |
|---|---|---|
| DISPLAY_NAME | PERSON_NUMBER | PAYROLL_RELATIONSHIP_NUMBER |
| Tax Reference | Job | Assignment Number |
| TAX_UNIT_NAME | JOB_NAME | ASSIGNMENT_NUMBER |
| Payroll | | |
| PAYROLL_NAME | | |

<?end template?>

<?template:Payslip_GLB_subt_PayPeriod?>

| Period Type | Period Start Date | Period End Date | Payment Date | Base Salary |
|---|---|---|---|---|
| Period Type | 1-Jan-2016 | 15-Jan-2016 | 20-Jan-2016 | BSIFPm          IFPmBS |

<?end template?>

<?template:Payslip_GLB_subt_Summary?>

IFSUMMARY

| Summary | | |
|---|---|---|
| **Description** | **Current** | **Year to Date** |
| Sumr  IFSumr Reporting Name | 9,999.99 | 9,999.99 IFSumr Sumr |
| Sumr  IFSumr Reporting Name | 9,999.99 | 9,999.99 IFSumr Sumr |
| Sumr  IFSumr Reporting Name | 9,999.99 | 9,999.99 IFSumr Sumr |

EIFSUMMARY

<?end template?>

# Challenges

» Local employer taxes
- Oregon TriMet
- Oregon transit
- New York MCTMT

» Created user defined table
- Rows – local tax name
- Column – Rate

» Create employer tax elements
- Non Recurring

» Create information element
- Standard link
- Attach fast formula
- Send results via indirect results to employer tax element

# User-Defined Table: YRC_EMPLOYER_TAX_RATE

## Basic Details

**Name** YRC_EMPLOYER_TAX_RATE

**Range or Match** Match

## User-Defined Columns

Actions ▼   View ▼   +   ✎   ✗

| Column Name |
| --- |
| RATE |

## User-Defined Rows

Actions ▼   View ▼   +   ✎ ▼   ✗   View History   ▤

| Sequence | Exact | Effective Start Date |
| --- | --- | --- |
| | OR_TRIMET_PCT | 01-01-1951 |
| | OR_LANE_PCT | 01-01-1951 |
| | NY_MCTMT_PCT | 01-01-1951 |
| | NM_EE_AMT | 01-01-1951 |
| | NM_ER_AMT | 01-01-1951 |

# User-Defined Table: User-Defined Table Values

## User-Defined Table

**Name** YRC_EMPLOYER_TAX_RATE

**Column Name** RATE

## User-Defined Table Values

Actions ▾ View ▾ ➕ ✏️ ▾ ✖️ View History 📇

| | Sequence | Exact | Value | Effective Start Date | Effe Date |
|---|---|---|---|---|---|
| | | OR_TRIMET_PCT | 0.7437 | 01-01-1951 | |
| | | OR_LANE_PCT | 0.71 | 01-01-1951 | |
| | | NY_MCTMT_PCT | 0.34 | 01-01-1951 | |
| | | NM_EE_AMT | 2.00 | 01-01-1951 | |
| | | NM_ER_AMT | 2.30 | 01-01-1951 | |

```
1   /*******************************************************************
2   FORMULA NAME: YRC_LOCAL _TAXATION_CALL
3   FORMULA TYPE: Oracle Payroll
4   VERSION: V1
5   OWNER: GT FOR YRC
6   Date: 2016/12/12
7   *******************************************************************/
8
9   L_DEFAULT_VALUE = 'PRD'
10
11  NY_Percent = TO_NUM(GET_TABLE_VALUE('YRC_EMPLOYER_TAX_RATE', 'RATE', 'NY_MCTMT_PCT', '99999'))
12  IF NY_Percent = 99999 THEN
13  (
14    PCT_MESG = 'Missing Tax Rate for Employer tax '
15    RETURN PCT_MESG
16  )
17
18  OR_LANE_Percent = TO_NUM(GET_TABLE_VALUE('YRC_EMPLOYER_TAX_RATE', 'RATE', 'OR_LANE_PCT', '99999'))
19  IF OR_LANE_Percent = 99999 THEN
20  (
21    PCT_MESG = 'Missing Tax Rate for Employer tax '
22    RETURN PCT_MESG
23  )
24
25  OR_TRIMET_Percent = TO_NUM(GET_TABLE_VALUE('YRC_EMPLOYER_TAX_RATE', 'RATE', 'OR_TRIMET_PCT', '99999'))
26  IF OR_TRIMET_Percent = 99999 THEN
27  (
28    PCT_MESG = 'Missing Tax Rate for Employer tax '
29    RETURN PCT_MESG
30  )
31
32  RETURN L_DEFAULT_VALUE, NY_Percent, OR_LANE_Percent, OR_TRIMET_Percent
33
```

# Fast Formula Basics

» Fast formulas can be used across various Fusion HCM products to:
- Perform payroll calculations
- Define rules for paid time off (PTO) accruals
- Calculate absence duration
- Define custom calculations for benefits administration
- Edit rules for object group population for elements or people
- Validate element input values or user-defined tables
- Validation and HCM extracts

# Fast Formula References

» Oracle Online Documentation Oracle Fusion Applications Fast Formula Guide
 http://docs.oracle.com/cd/E38454_01/doc.1117/e36894.pdf (Release 7)
» Fusion Payroll: Fast Formula Frequently Asked Questions (FAQ) (Note 1579739.1)
» Fusion Payroll: Fast Formulas Troubleshooting Guide (Note 1560556.1)
» Case Study: Fusion Payroll: How to Create and Modify a Fast Formula(Note 1579738.1)
» Case Study : Fusion Fast Formula: How to Create Fast Formula For Element Entry Input Value
 Validation (Note 1615323.1)
» Fusion Global Payroll: Types Of License In Fusion Payroll (Note1611941.1)
» Benefits Fast Formula Reference Guide for Oracle Fusion Benefits (Note 1456985.1)
» Fusion Fast Formula: OHUG Presentation June 2014 (Note 1900375.1)

# Problem Definition

» Company paid union health and welfare benefits
» Over 100 different funds based on union local
» Benefit is based on different criteria

- Days worked in a work-week

- Hours worked in a work-week

- Trips completed in a work-work

- Gregorian month

# Days Worked Scenario

»Multiple timecards in a day, must count as one
»Used working storage/arrays to keep track of date earned
»Timecard formulas were modified to track the number of days
»Employer liability formulas were modified to calculate the actual liability

# Working Storage

» Internal cache memory that is global to the payroll process
» Values stored by one formula can be referenced in subsequent formulas
» There are four working storage area call methods:

- WSA_EXISTS
- WSA_DELETE
- WSA_SET
- WSA_GET

# Arrays

» Variables that can hold dates, numbers or text
» Similar to PL/SQL index-by tables
» Methods are provided to get the first and last indexes and to get the next or prior index given an index

*J = J + 1*

*Date_Earned[J] = This_Date_Earned*

# Looping

» WHILE-loop type is supported
  • Allows to go through a set of values (users-defined tables, date tracked values)

# Putting it all together

» Since the names are global, had to add assignment ID to the WSA name

   *Date_Earned_Name = 'HWP_Date_Earned' + '*' + TO_CHAR(Assg_ID)*

» Check for existence of the WSA variable:

   *This_Date_Earned = TO_CHAR(Earned_Date)*

   *IF (WSA_EXISTS(Date_Earned_Name,'TEXT_NUMBER'))*
   *THEN YRC_Date_Earned = WSA_GET(Date_Earned_Name,EMPTY_TEXT_NUMBER)*
   *ELSE*
       *YRC_Date_Earned[1] = This_Date_Earned*

# Putting it all together

» Loop through the array to see if current date exists:

```
i=1
Found = 'NO'
WHILE (YRC_Date_Earned.EXISTS(i)) LOOP
 (
   IF YRC_Date_Earned[i] = This_Date_Earned THEN Found = 'YES'
   i=i+1
 )
IF Found = 'NO' THEN YRC_Date_Earned[i] = This_Date_Earned
```

# Putting it all together

» Store array back into working storage

*WSA_SET(Date_Earned_Name,YRC_Date_Earned)*

# Summary

» Working storage is a good way to pass data between formulas and assignments

» Arrays can simplify the storing of local variables

» Looping provides an efficient means to traverse through arrays of data

» Knowledge of the capabilities of fast formulas can turn gaps into fits