XBRL Global Ledger Update and Trends

Avoiding the dangers of leaping a chasm in two jumps
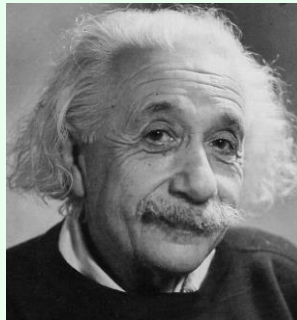
Eric E. Cohen

Co-founder, XBRL

Yokohama   7-Nov-2012

XBRL XXV

Agenda

- Backgrounder
- What's new?
- Today's intellectual exercise

"You cannot solve a problem from the same consciousness that created it. You must learn to see the world anew."
Albert Einstein

Some People Believe

- That XBRL is for sharing external facing information amongst shareholders

- That some other tool may be necessary for expressing complex information, such as ERP data, within organizations

- In fact, XBRL was designed with a much broader view

- And XBRL has published a standard for representing the data found within ERP systems … XBRL's Global Ledger Taxonomy Framework

- Developed in collaboration with virtually every EDI and XML organization developing accounting standards
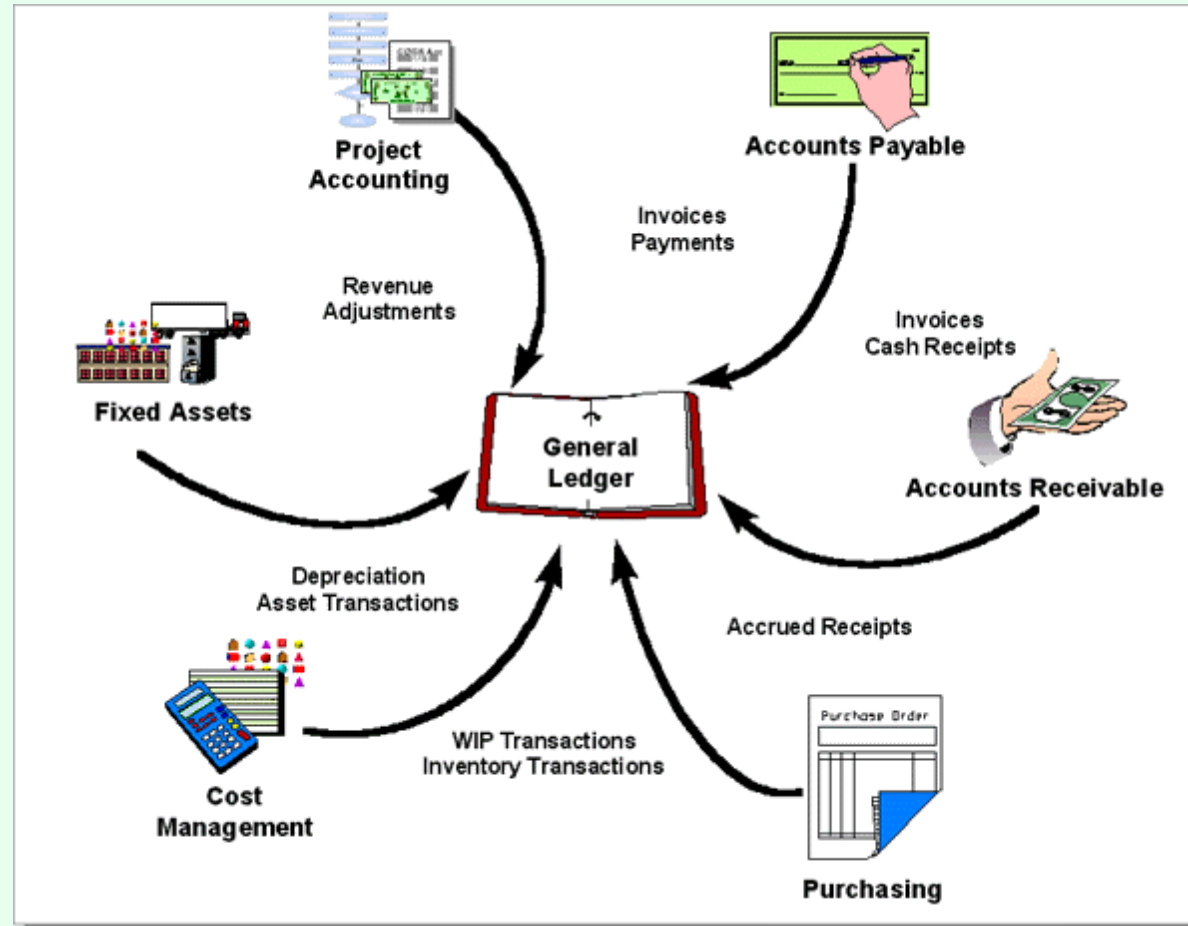
What is XBRL Global Ledger

- Part of the broader world of XBRL

- The only taxonomy DEVELOPED by XBRL International

- An evolving, generic representation of the files in a typical ERP system: quantitative, qualitative

- An XML-based standard that can be used for import/export, Web services payload

- The bridge between source/target applications and XBRL reporting
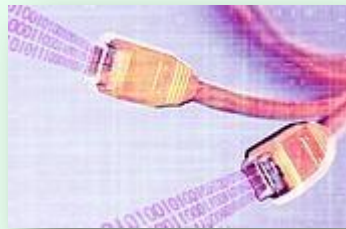
What XBRL Global Ledger Can Represent

Independent

- *System*
- *Language*
- *Region*
- *Reporting area*
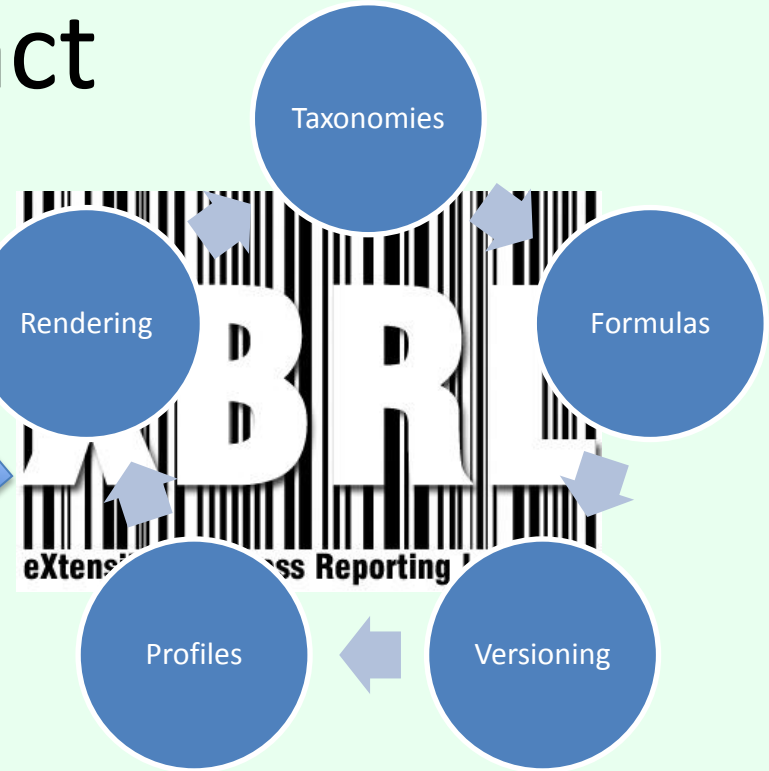- *Process*
- *Chart of accounts*
- *GAAP*

And able to bridge between them all – "the Great Reconciler"

XBRL *Global* Ledger

- Standardized internal, detailed data
- Supporting standardized processes

Getting Abstract

Semantics

Processing Logic

Taxonomies

Rendering

Formulas

Profiles

Versioning
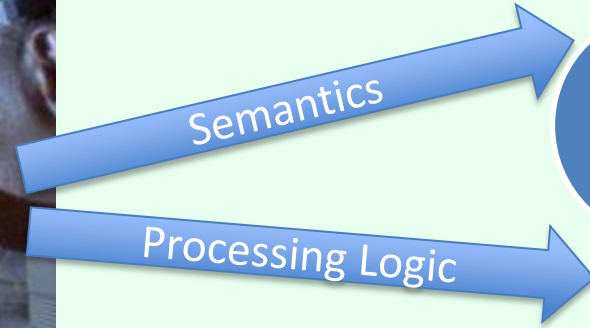
Application-independent
Transparent
Accessible

XBRL Inside ... Without Code Changes

- Removing "business logic" from applications
- Moving the logic to XBRL taxonomies and related artefacts
- Embedding XBRL ... without code changes
- Flexible and open, adapts to changes without upgrades, add-ons or replacement
- "Cheap" technology?

Standardizing Every System with XBRL
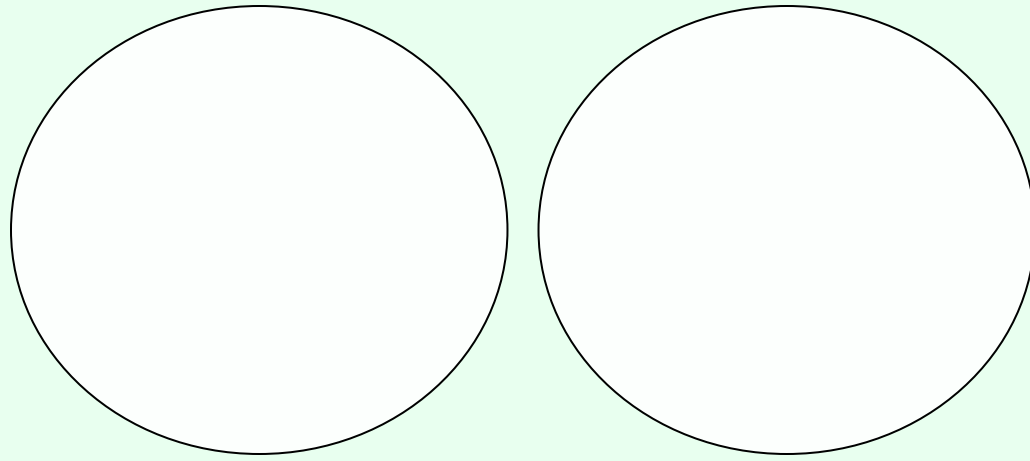
Across Language
Across data definitions
Across file formats

System 1	System 2	System 3
Account#	勘定科目番号	Identificador de la Cuenta
Description	勘定科目説明文	Descripción Principal de la Cuenta
Amount	金額	Monto Monetario
PostDate	転記日付	Fecha de Asignación/Ingreso

XBRL GL is like

One type of ingredient

mimics many familiar things

XBRL GL "Profiles"

- Just tell me *exactly* what I
  - Must, Can, Must not
- Keeps XBRL GL open and flexible
- Provides structure for constraints in closed environments

Turkish Revenue – Battling Warehouses of Paper

File Edit View History Bookmarks Tools Help

Teknik Klavuzlar & e-Defter Oluşturma Adıml...

www.edefter.gov.tr/web/guest/2

Google   Feedback

E-Defter Portalı

Ana Sayfa   Başvuru   ▶ Teknik Klavuzlar & e-Defter Oluşturma Adımları   Sık Sorulan Sorular   Önemli Bağlantılar   Uyumlu Programlar

e-Defter Paketleri

e-Defter Uygulaması Teknik Klavuzları ve indirilebilir paketleri aşağıda verilmiştir:

- e-Defter Paketi
- e-Defter Yazılım Uyumluluk Onay Kılavuzu
- e-Defter Yazılım Uyumluluk Taahhütnamesi

e-Defter Uygulamasının Teknik Mimarisi

1 Sıra No.lu Elektronik Defter Genel Tebliği düzenlemesi gereğince yevmiye defteri ve büyük defter, XBRL GL e-defter format ve standartlarına göre hazırlanacaktır. Bu standartlar defterler kayıtlarının içeriği ve standartlarını belirlemektedir.

Genel Tebliğ düzenlemelerine göre söz konusu standartlara uygun olarak oluşturulan dosyaların e-defter olarak kabul edilebilmesi için mali mühür ile mühürlenmesi ya da güvenli elektronik imza ile imzalanması ve e-Defter Uygulaması aracılığı ile beratının alınması gerekmektedir. Konu ile ilgili detaylı açıklamalar **e-Defter Paket** dosyası içerisinde bulunan e-Defter Teknik Kılavuz dokümanında açıklanmıştır.

 a. E-Defter dosyaları ilgili kılavuzlarda belirtilen standartlar ve formata uygun biçimde hazırlanır.

 b. Hazırlanan dosya "defter" şema yapısında öngörülen alana yerleştirilir.

 c. Oluşturulan "defter" dosyası mühürlenir ya da imzalanır. (Bu şekilde oluşturulan dosya, mükellefin beratının aldıktan sonra defter olarak saklamak zorunda olduğu dosyadır. Ancak bu dosyanın defter olarak geçerli sayılabilmesi için e-defter beratının alınması zorunludur.)

 d. Mühürlenen ya da imzalanan "defter" dosyasının belli bilgileri alınarak "berat" dosyası oluşturulur.

 e. Berat dosyası mühürlenir ya da imzalanır.

 f. Mühürlü ya da imzalı berat dosyası paketlenir.

 g. Hazırlanan paket www.edefter.gov.tr adresinde bulunan e-Defter Uygulamasına giriş yapılarak yüklenir.

 h. Berat dosyası Gelir İdaresi Başkanlığı mali mührü ile de mühürlenerek indirilecek biçimde defter sahibinin erişimine açılır. (Erişime açılan e-defter beratı ile imzalı veya mühürlü defter dosyası birlikte elektronik ortamda muhafaza edilecektir.)

1. Adım –Mükellef Tebliğde belirlenen şartlar ve XBRL formatına uygun aylık defterini hazırlar

2. Adım – Gerçek kişi mükellef e-imza ile defterini imzalar Tüzel kişiler Mali Mühür ile onaylar

3. Adım onaylanan defterin imza/mühür değeri alınır

4. Adım e-Defterin imza değerini taşıyan e-Defter Beratı mükellef tarafından elektronik ortamda hazırlanarak imzalanır/mühürlenir

AICPA "Audit Data Standard"

- Project page
  - http://www.aicpa.org/InterestAreas/FRC/AssuranceAdvisoryServices/Pages/AuditDataStandardWG.aspx

- Exposure draft
  - http://www.aicpa.org/InterestAreas/FRC/AssuranceAdvisoryServices/DownloadableDocuments/FINAL%20Audit%20Data%20Standards%20ED.pdf

- Overseen by AICPA Assurance Services Executive Committee (ASEC)

- Developed by Emerging Assurance Technologies Task Force

- Comment period ended Fall 2012

Audit Data Standard

- General Ledger Standards
  - GL_Detail
  - Trial_Balance
  - Chart_Of_Accounts
  - Source_Listing

- Accounts Receivable Standards
  - Open_Invoices
  - AR_Activity
  - New_Invoices
  - Customer_Master
  - Invoice_Type
  - Payment_Type

From Exposure Draft, subject to change

Opportunity: Cataloguing the Compromises

3.3 Customer_Master_YYYYMMDD

The Customer_Master_YYYYMMDD file may be requested to be generated more than once for the period under review to accommodate changes

Field #	Field Name	Level	Flat File Data DataType	Length	XBRL GL Taxonomy Element	Description
1	Customer_Account_ID	1	TEXT	100	gl-cor:identifierCode for internal # with gl-cor:identifierType = {customer}	Identifier of the customer from whom payment is expected or to whom unused credits have been applied.
2	Customer_Account_Name	1	TEXT	100	gl-cor:identifierDescription	The name of the customer corresponding to the customer account ID as recorded in the customer master file.
3	Customer_Physical_Street_Address1	1	TEXT	100	gl-bus:identifierStreet (*) with gl-bus:identifierAddressPurpose = "physical"	The customer's physical street address line 1.
4	Customer_Physical_Street_Address2	1	TEXT	100	gl-bus:identifierAddressStreet2*	The customer's physical street address line 2.
5	Customer_Physical_City	1	TEXT	100	gl-bus:identifierCity*	The physical city where the customer is located.
6	Customer_Physical_State_Province	1	TEXT	6	gl-bus:identifierStateOrProvince*	The physical state or province where the customer is located. Recommend ISO 3166-2.
7	Customer_Physical_ZipPostalCode	1	NUMERIC		Eric C	The zip code where the customer is physically located.
8	Customer_Physical_Country	1	TEXT	3	gl-bus:identifierCountry*	The country code where the customer is physically located. Recommend ISO 3166-1 Alpha

Sample Data

Customer_Account_ID	AAA	BBB	CCC	
Customer_Account_Name	Arnold's Amazing Anteaters	Barbara's Bodacious Bouquets	Camden Candy Corner	
Customer_Physical_Street_Address1	100 Pastoral Lane	25 Main Street, Suite 400	47 Stephenwood Street	
Customer_Physical_Street_Address2			Complex III	
Customer_Physical_City	Akron	Bayonne	Camden	
Customer_Physical_State_Province	Ohio	New Jersey	Pennsylvania	
Customer_Physical_ZipPostalCode	12345	65432		19283
Customer_Physical_Country	United States	United States	Canada	
Customer_TIN	16-4876544	345-67-8765	AHQISOTDHCVNDJS	
Customer_Billing_Address1	100 Pastoral Lane	25 Main Street, Suite 400	BOX 500736	
Customer_Billing_Address2				
Customer_Billing_City	Akron	Bayonne	Camden	
Customer_Billing_State_Province	Ohio	New Jersey	Pennsylvania	
Customer_Billing_ZipPostalCode	12345	65432		19200
Customer_Billing_Country	United States	United States	Canada	
Active_Date	Jan-01-2001	Feb-15-2003	Dec-29-2011	
Inactive_Date			Dec-30-2011	
Transaction_Credit_Limit	50000	20000		1
Overall_Credit_Limit	100000	25000		5
Customer_Terms_Percentage	0.02	0.02		0
Customer_Terms_Days	10	15		0
Last_Modified_Date			Dec-29-2011	
Last_Modified_By			EEC	
User_ID	ABC	ABC	EEC	
Approved_By	EEC	EEC	RMW	
Entry_Date	Jan-01-2001	Feb-15-2003	Dec-28-2011	
PrimaryContact_Name	Arnold Aultfather	Barbara Bodacious	Otto Wellwood	
PrimaryContact_Phone	+1-616-234-9090	+44 (0) 234-44-2334	1-800-SWEETEMS	
PrimaryContactEmail	aa@arnoldsamazing.com	barbod@bodaciousbarb.com	owellwood@camdencandy.com	

Some content within systems must be transformed before exporting to ADS (FF and/or XBRL GL)

Text Format

U+0009

Customer_Account_ID	Customer_Account_Name	Customer_Physical_Street_Address1	Customer_Physical_Street_Address2	Customer_Physical_City	Customer_Physical_State_Province	Customer_Physical_ZipPostalCode	Customer_Physical_Country	Customer_TIN	Customer_Billing_Address1	Customer_Billing_Address2	Customer_Billing_City	Customer_Billing_State_Province	Customer_Billing_ZipPostalCode	Customer_Billing_Country	Active_Date	Inactive_Date	Transaction_Credit_Limit	Overall_Credit_Limit	Customer_Terms_Percentage	Customer_Terms_Days	Last_Modified_Date	Last_Modified_By	User_ID	Approved_By	Entry_Date	PrimaryContact_Name	PrimaryContact_Phone	PrimaryContactEmail

AAA	Arnold's Amazing Anteaters	100 Pastoral Lane		Akron	OH	12345	USA	16-4876544	100 Pastoral Lane		Akron	OH	12345	USA	Jan-01-2001		50000	100000	0.02	10			ABC	EEC	Jan-01-2001	Arnold Aultfather	+1-616-234-9090	aa@arnoldsamazing.com

BBB	Barbara's Bodacious Bouquets	"25 Main Street, Suite 400"		Bayonne	NJ	65432	USA	345-67-8765		"25 Main Street, Suite 400"		Bayonne	NJ	65432	USA	Feb-15-2003		20000	25000	0.02	15			ABC	EEC	Feb-15-2003	Barbara Bodacious	+44 (0) 234-44-2334	barbod@bodaciousbarb.com

CCC	Camden Candy Corner	47 Stephenwood Street	Complex III	Camden	PA	19283	Canada	AHQISOTDHCVNDJS	BOX 500736		Camden	PA	19200	Canada	Dec-29-2011	Dec-30-2011	1	5	0	0	Dec-29-2011		EEC	EEC	RMW	Dec-28-2011	Otto Wellwood	1-800-SWEETEMS	owellwood@camdencandy.com

XBRL GL: ADS Customer_Master Profile

```xml
<gl-cor:entryHeader>
<!– An opportunity to provide comments →
            <gl-cor:enteredBy contextRef="now">ABC</gl-cor:enteredBy>
            <gl-cor:enteredDate contextRef="now">2003-02-15</gl-cor:enteredDate>
            <gl-bus:entryResponsiblePerson contextRef="now">EEC</gl-bus:entryResponsiblePerson>
                        <gl-cor:entryDetail>
                        <gl-cor:amount unitRef="usd" contextRef="now" decimals="INF">25000</gl-cor:amount>
                        <gl-muc:multicurrencyDetail>
                        <gl-muc:amountRestatedAmount unitRef="usd" decimals="INF" contextRef="now">20000</gl-muc:amountRestatedAmount>
                        </gl-muc:multicurrencyDetail>
                                    <gl-cor:identifierReference>
                        <gl-cor:identifierCode contextRef="now">BBB</gl-cor:identifierCode>
                        <gl-cor:identifierDescription contextRef="now">Barbara's Bodacious Bouquets</gl-cor:identifierDescription>
                        <gl-cor:identifierType contextRef="now">C</gl-cor:identifierType>
                        <gl-bus:identifierAddress>
                                    <gl-bus:identifierAddressDescription contextRef="now">Physical</gl-bus:identifierAddressDescription>
                                    <gl-bus:identifierStreet contextRef="now">25 Main Street, Suite 400</gl-bus:identifierStreet>
                                    <gl-bus:identifierCity contextRef="now">Bayonne</gl-bus:identifierCity>
                                    <gl-bus:identifierStateOrProvince contextRef="now">NJ</gl-bus:identifierStateOrProvince>
                                    <gl-bus:identifierCountry contextRef="now">USA</gl-bus:identifierCountry>
                                    <gl-bus:identifierZipOrPostalCode contextRef="now">65432</gl-bus:identifierZipOrPostalCode>
                        </gl-bus:identifierAddress>
                        <gl-bus:identifierAddress>
                                    <gl-bus:identifierAddressPurpose contextRef="now">Billing</gl-bus:identifierAddressPurpose>
                                    <gl-bus:identifierStreet contextRef="now">25 Main Street, Suite 400</gl-bus:identifierStreet>
                                    <gl-bus:identifierCity contextRef="now">Bayonne</gl-bus:identifierCity>
                                    <gl-bus:identifierStateOrProvince contextRef="now">NJ</gl-bus:identifierStateOrProvince>
                                    <gl-bus:identifierCountry contextRef="now">USA</gl-bus:identifierCountry>
                                    <gl-bus:identifierZipOrPostalCode contextRef="now">65432</gl-bus:identifierZipOrPostalCode>
                        </gl-bus:identifierAddress>
```

Today's Intellectual Exercise

The XBRL GL philosophy:

a. Is *still* ahead of its time

b. Has seen its time come and go

c. Is as valid today as it was when crafted

XBRL GL Philosophy

1. Represent what is found in the databases of accounting and operational systems. Stay away from calculated fields.
2. Represent both the exact content (audit) of those databases while allowing for normalization of key fields (data transfer).
3. Allow both modular and monolithic approaches to data representation
4. Use a generic and reusable approach where appropriate
5. Specialize only where absolutely needed
6. The originating document is key to the audit
7. The primary amount is key to the audit
8. XBRL GL should not be used for transactions
   – [i.e., for two way transactions – EDI – it is made to represent historical transactions]
9. XBRL GL should leverage the power of XBRL but be familiar to non-XBRL experts

Our analysts want to be able to slice and dice the data. We want the line items themselves to be relatively simplified – such as amounts as a data point – and then everything else be an attribute to the primary data point. Everything should be expressed as a multi-dimensional model. After all, everything ... time, organization ... is just a dimension.

Line item to line item mapping is the easiest. Our DBA are most comfortable when line items are put into the data dictionary, tracked simply, and then connections are made. To have to look at other elements or make any other survey of the *context* of the information is not acceptable. We want to know exactly and unambiguously what to do. File by file, document by document, field by field.

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XBRL
eXtensible Business Reporting Language

Customer Master File
Customer Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Contractor Master File
Contractor Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Vendor Master File
Vendor Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Internal Sales Master File
Salesperson Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Employee Master File
Employee Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

External Sales Master File
Salesperson Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Specific Approach
- Concept explosion
- Possible reuse
-

XBRL
eXtensible Business Reporting Language

BRL JAPAN

Specific Approach

- Concept explosion
- Possible reuse

Customer Master File

Customer Number

Name

Street

City   State   Zip

Phone

Email

Tax ID

Vendor Master File

Vendor Number

Name

Street

City   State   Zip

Phone

Email

Tax ID

Employee Master File

Employee Number

Name

Street

City   State   Zip

Phone

Email

Tax ID

Specific, unrelated

Issues:
Managing change
Grouping

Specific, derived from base type

Issues:
Managing change

Specific, other approaches ...

XBRL
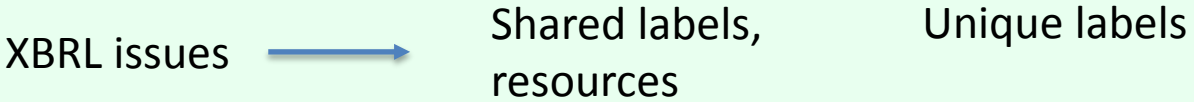eXtensible Business Reporting Language

Generic Approach

- Interpretation
- Comfort by some parties in 1-1 for mapping
- Need for Profiles
- Need for examples, documentation

Party Master File
Party Number
Name
Street
City   State   Zip
Phone
Email
Tax ID

Generic; driven by *placement*

Generic; driven by *enumerations*

XBRL issues →

Shared labels, resources

Unique labels

Dimensional Approach

Amount

Name
Street
City   State
                Zip

Phone
Email
Tax ID

Customer

Vendor

Employee

Salesperson
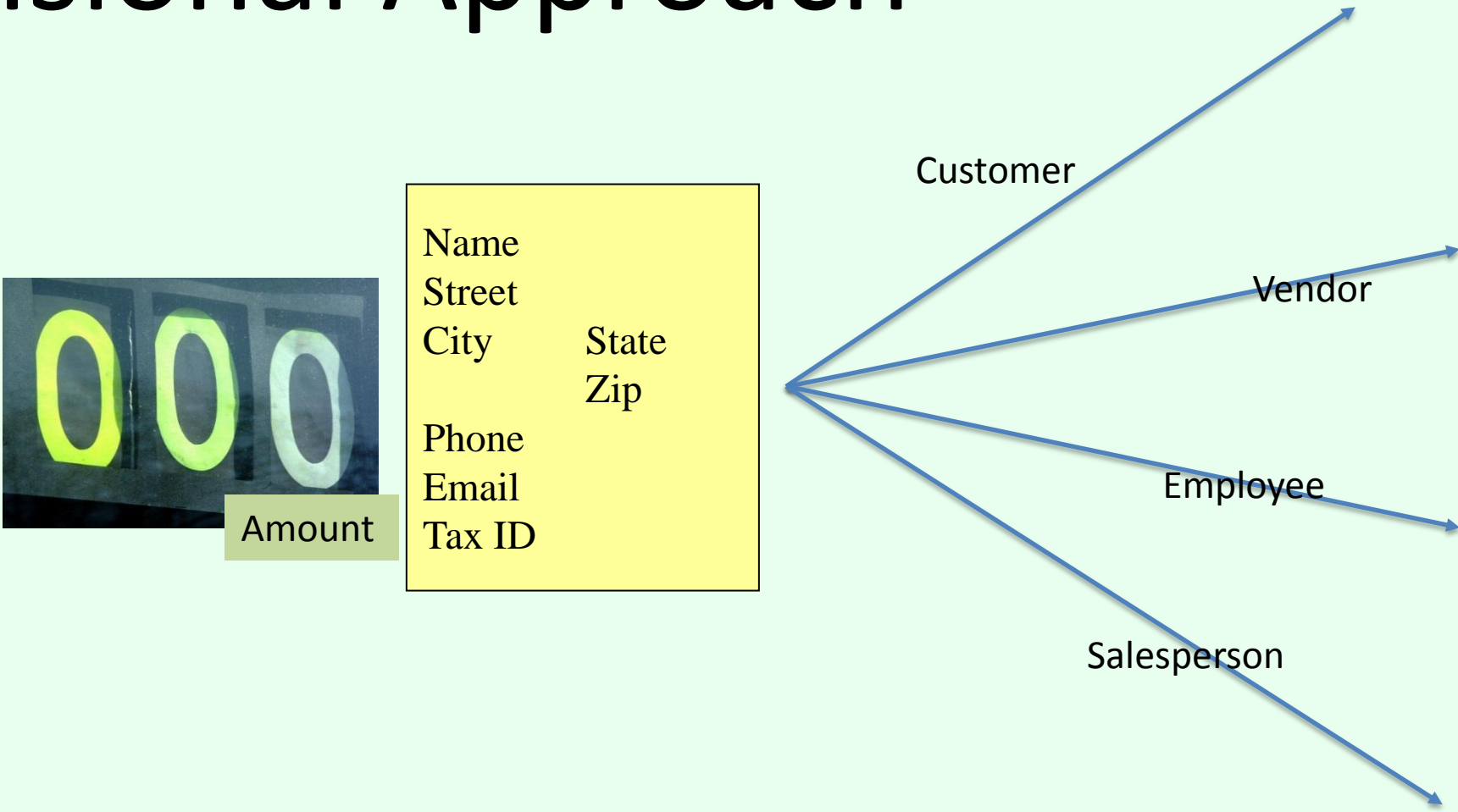
Tiered Accounts Structures
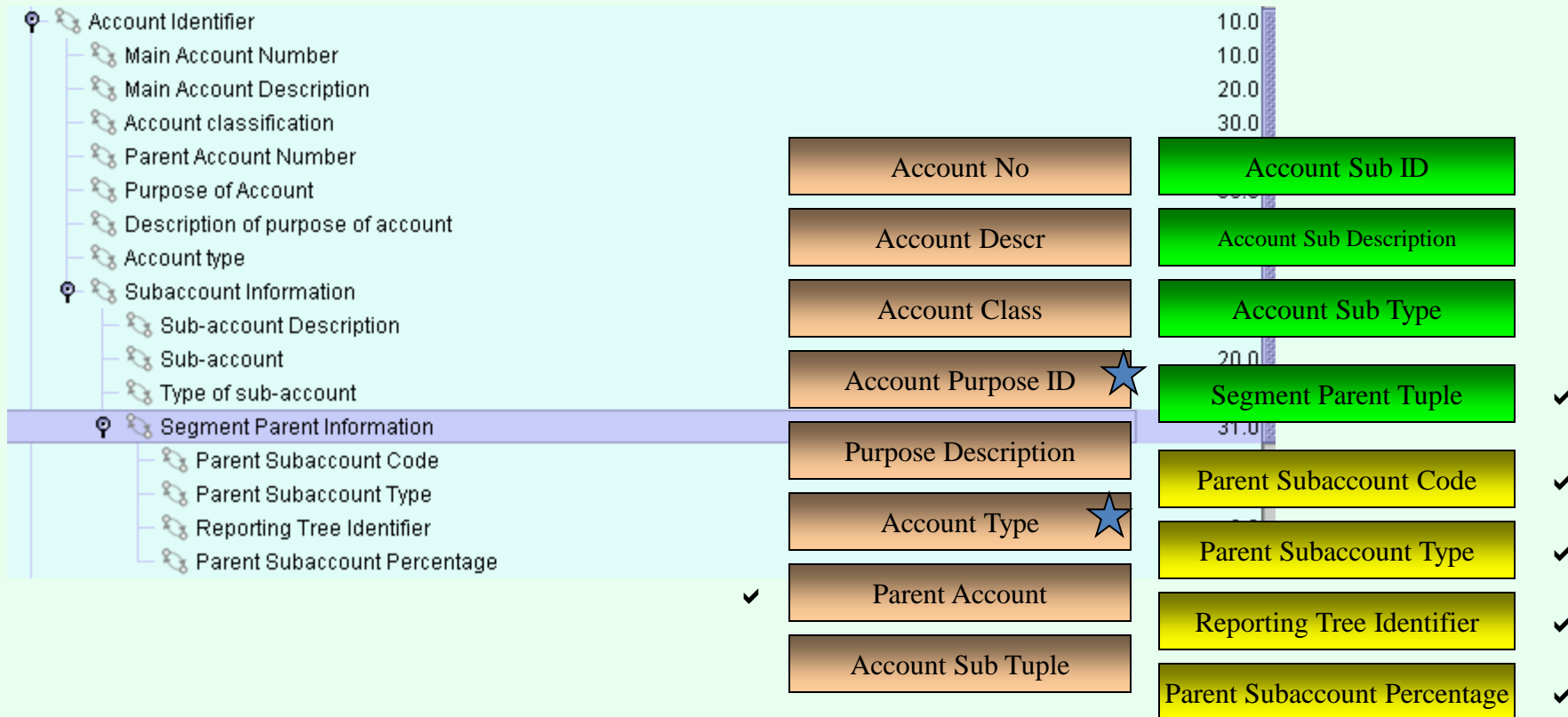
General ledger accounts, bank accounts, customers, vendors, statistical accounts … Europe vs US approach

In Chart of Accounts … or Separate

Concept	Account approach Defined with *accountType enumerations*	Subledger approach
GL account Bank Statistical account	account	(same)
Customers Vendors Employees	customer vendor employee	identifierReference structure
Jobs	job	jobInfo structure
Measurables	measurable	measurable structure
Others	other	(as needed)

Utilities
primary account
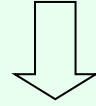
⬇

5300-302-000-107-G

Reporting Structure

302: Northeast
Division

000: General
Profit Center

107: Sales
Department

G: Government
Project

Account Structure

ENTRYDETAIL

Account Identifier
- A-Z Main Account Number
- A-Z Main Account Description
- A-Z Account Classification
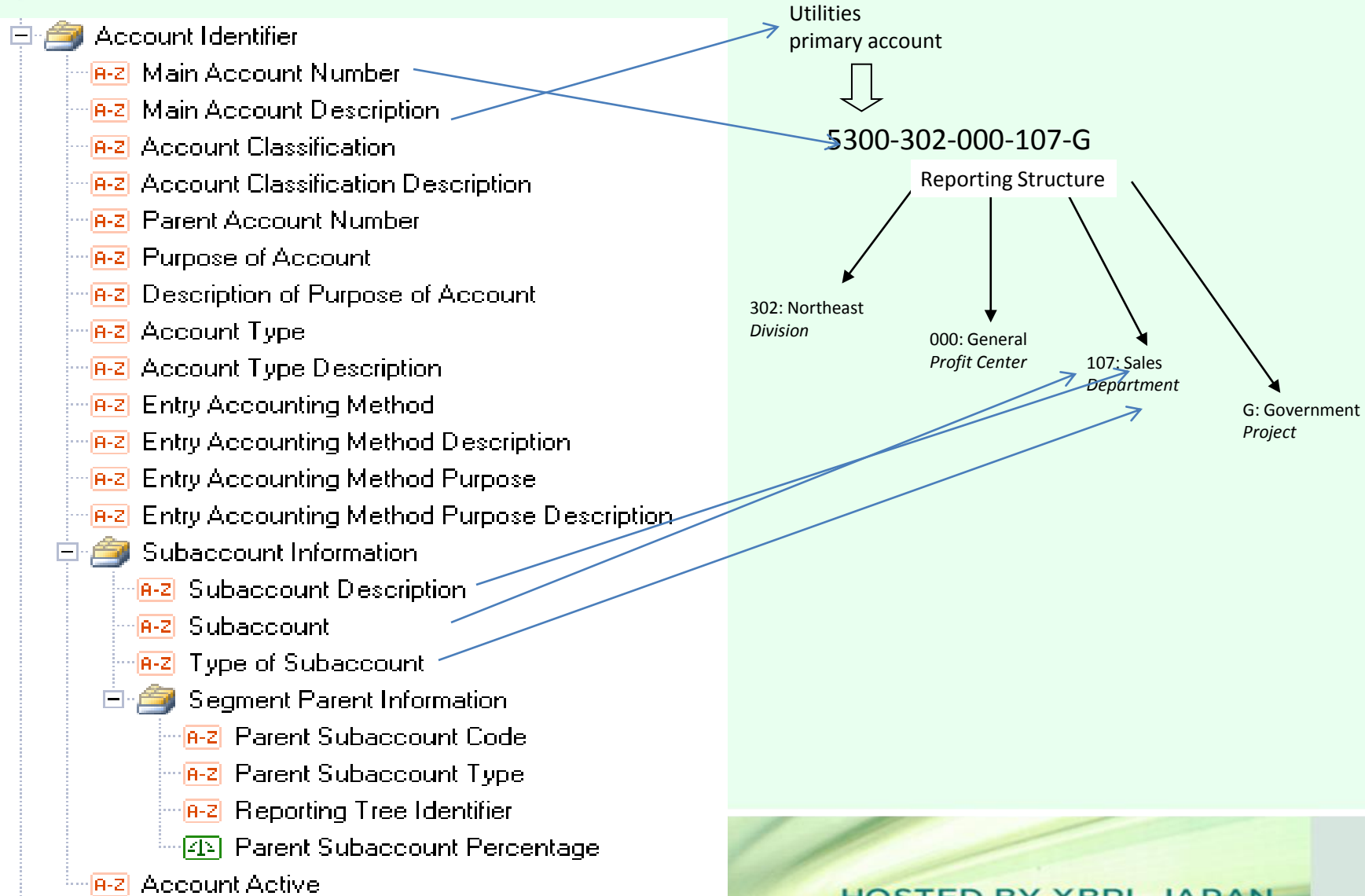- A-Z Account Classification Description
- A-Z Parent Account Number
- A-Z Purpose of Account
- A-Z Description of Purpose of Account
- A-Z Account Type
- A-Z Account Type Description
- A-Z Entry Accounting Method
- A-Z Entry Accounting Method Description
- A-Z Entry Accounting Method Purpose
- A-Z Entry Accounting Method Purpose Description

Subaccount Information
- A-Z Subaccount Description
- A-Z Subaccount
- A-Z Type of Subaccount

Segment Parent Information
- A-Z Parent Subaccount Code
- A-Z Parent Subaccount Type
- A-Z Reporting Tree Identifier
- Parent Subaccount Percentage

A-Z Account Active

Utilities
primary account

5300-302-000-107-G

Reporting Structure

302: Northeast *Division*

000: General *Profit Center*

107: Sales *Department*
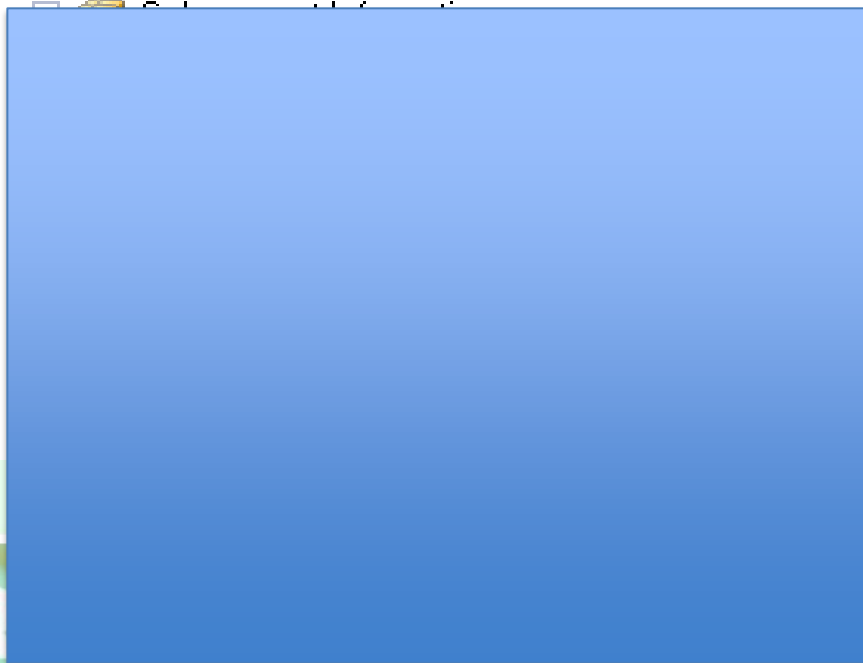
G: Government *Project*

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XBRL
eXtensible Business Reporting Language

Account Identifier
- Main Account Number
- Main Account Description
- Account Classification
- Account Classification Description
- Parent Account Number
- Purpose of Account
- Description of Purpose of Account
- Account Type
- Account Type Description
- Entry Accounting Method
- Entry Accounting Method Description
- Entry Accounting Method Purpose
- Entry Accounting Method Purpose Description

Primary account	Reporting structure			
5300	302	000	107	G
Utilities	Northeast	General	Sales	Government
Primary a/c	Division	Profit Center	Department	Project

divisionID
divisionDescription
profitCenterID
profitCenterDescription
departmentID
departmentDescription
projectID
projectDescription

Level 1	Level 2	Level 3	Primary a/c	1st segment	2nd segment	3rd segment	4th segment
account							
	accountMainID		5300				
	accountMainDescription		Utilities				
	mainAccountType		expense				
	accountPurposeCode		usgaap				
	accountPurposeDescription						
	accountType		account				
	accountSub						
		accountSubID		302	000	107	G
		accountSubDescription		Northeast	General	Sales	Government
		accountSubType		Division	Profit Center	Department	Project

XBRL GL approach:

Primary account	Reporting structure			
5300	302	000	107	G
Utilities	Northeast	General	Sales	Government
Primary a/c	Division	Profit Center	Department	Project

Level 1	Level 2	Primary a/c
account		
	accountMainID	5300
	accountMainDescription	Utilities
	mainAccountType	expense
	accountPurposeCode	usgaap
	accountPurposeDescription	
	accountType	account
	divisionID	302
	divisionDescription	Northeast
	profitCenterID	000
	profitCenterDescription	General
	departmentID	107
	departmentDescription	Sales
	projectID	G
	projectDescription	Government

Issues

- Duplicating existing content
- OK in closed environment? Not GLTFTA, not Framework
- Maintenance issues

Point of View

Database Administrators

Management

Programmers

Other decision makers

What's easy?
What's cheap?
What promotes the future?
…