



ARTS

Association for Retail Technology Standards
of the  **NATIONAL RETAIL FEDERATION**

Profitbase Users Conference
April 23, 2008

ARTS Launch



ARTS
Association for Retail Technology Standards
of the National Retail Federation

WWW.NRF-ARTS.ORG



 National
Retail Federation

Richard Mader

- Executive Director, Association for Retail Technology Standards (ARTS)
- 30+ Years as Retail IT Executive
 - Boscov's Department Stores
 - BonTon Department Stores
 - Federated Department Stores
 - McCrory's Variety Stores

Today Presentation

- ARTS introduction and benefits of standards
 - Richard Mader - ARTS
- Data Management with ARTS – 12:30
 - Graham Hill – PCMS
- ARTS Data Warehouse Model – 12:30
 - Edvard Gundersen - Profitbase
- Standards to support Business – 14:15
 - Above Speakers
 - Willem Haring- Microsoft
 - Christopher Morys – GK Software
- Q and A

ARTS

- Association for Retail Technology Standards (ARTS)
 - The Standards Division of NRF
 - Members (204) are Retailers and Vendors
 - International, 40% of members
- Mission
 - To enable the low cost, rapid deployment of technology in retail by reducing integration efforts through platform independent, vendor neutral standards.



WWW.NRF-ARTS.ORG



Membership

- Members

- 204 Total
- 120 Vendors
- 84 Retailers
- 40% International

- New in 2007

- NEC
- J C Penney's
- Carrefour
- Tesco
- Nike
- Kroger's
- IKEA
- Myer
- REI

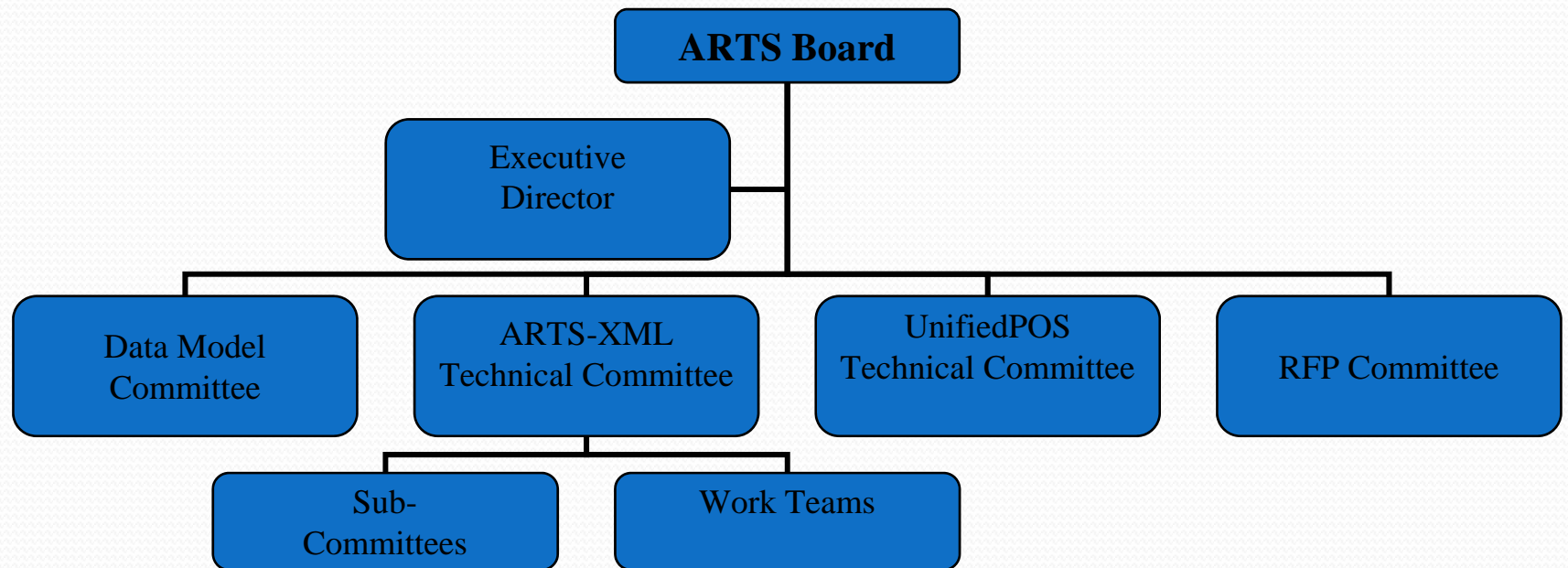
Members in Scandinavia

- ProfitBase AB
- H&M
- IBM
- Microsoft
- Fujitsu
- SAP
- Oracle
- NorgesGruppen ASA
- Aldata Solution Oyj
- Axis Communications
- BizIntel AB
- Coop Denmark A/S
- Crafthouse Consulting Oy
- Extenda AB
- Lindbak Retail Systems AS

ARTS is one Division of NRF



ARTS Organization



ARTS Board

- Academy Sports
- SAP
- Oracle
- CSK Auto Corporation
- Adidas
- El Corte Ingles
- Microsoft
- AccessVia
- PCMS
- Escalate Retail
- NCR Corporation
- Seiko Epson Corp.
- Fujitsu
- The Home Depot
- IBM Corporation
- The Limited
- Wincor Nixdorf
- Kroger's
- Reject Shop

ARTS Evolution Highlights

Jan 1993 - ARTS organized

May 1994 - ARTS Expands Internationally

Jan 1996 - Data Model Published

Oct 1998 - UnifiedPOS organized

Jan 1999 - ARTS is acquired by NRF

May 1999 - ARTS XML begins

Sep 2003 - Conformance Testing

Jan 2004 - ARTS publishes first RFP/ITT

Jan 2005 - IP Policy to protect implementers

May 2006 - SOA Support project



ARTS is Unique

- Retailers and Vendors working Together
- Strong Retail leadership
- Focus on “Inside the Store” but connect the enterprise
- Truly International
- Continually Strive for Cooperation
- One Mission for 14+ Years
- Conformance to Protect Investment

Why Global Standards in Retail

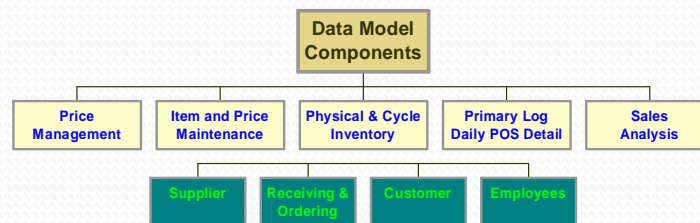
- Retailers spend less on IT
 - Banking 6.0% of revenue
 - Health Care 3.5%
 - Manufacturing 2.0%
 - Retail 1.6%
- Business processes are similar everywhere
- IT vendors are Global
- Purchase most applications (**Integration**)
- All retailers via e-Commerce can be Global

Retail IT Today

- Required to be successful
 - Lower operating costs
 - Support multiple sales channels
- Required applications (all fed from POS)
 - Price optimization
 - Inventory management
 - Demand Forecasting
 - Replenishment
 - CRM
 - Business Intelligence
 - Workforce Management

ARTS Standards

- Data Model



- UnifiedPOS Standard Device Interface
- ARTS-XML Standard XML Messages
- Standard Requests for Proposal (RFP's) (ITT's)

The ARTS Data Model

- A relational data base design of all the data required to support retail operations
 - 602 Tables
 - 4500 Data Elements
- Provides a blueprint for gathering and integrating data.
- Retailing best practices expressed in data format

Contributors & Users of Data Model

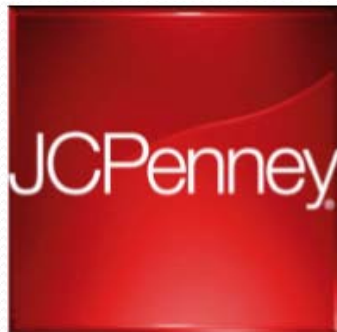
NORDSTROM



the limited



Longs Drugs



Pier 1 imports



Smart & Final



MARKS & SPENCER



The ARTS Model for Business Intelligence

Consistent data, single source.

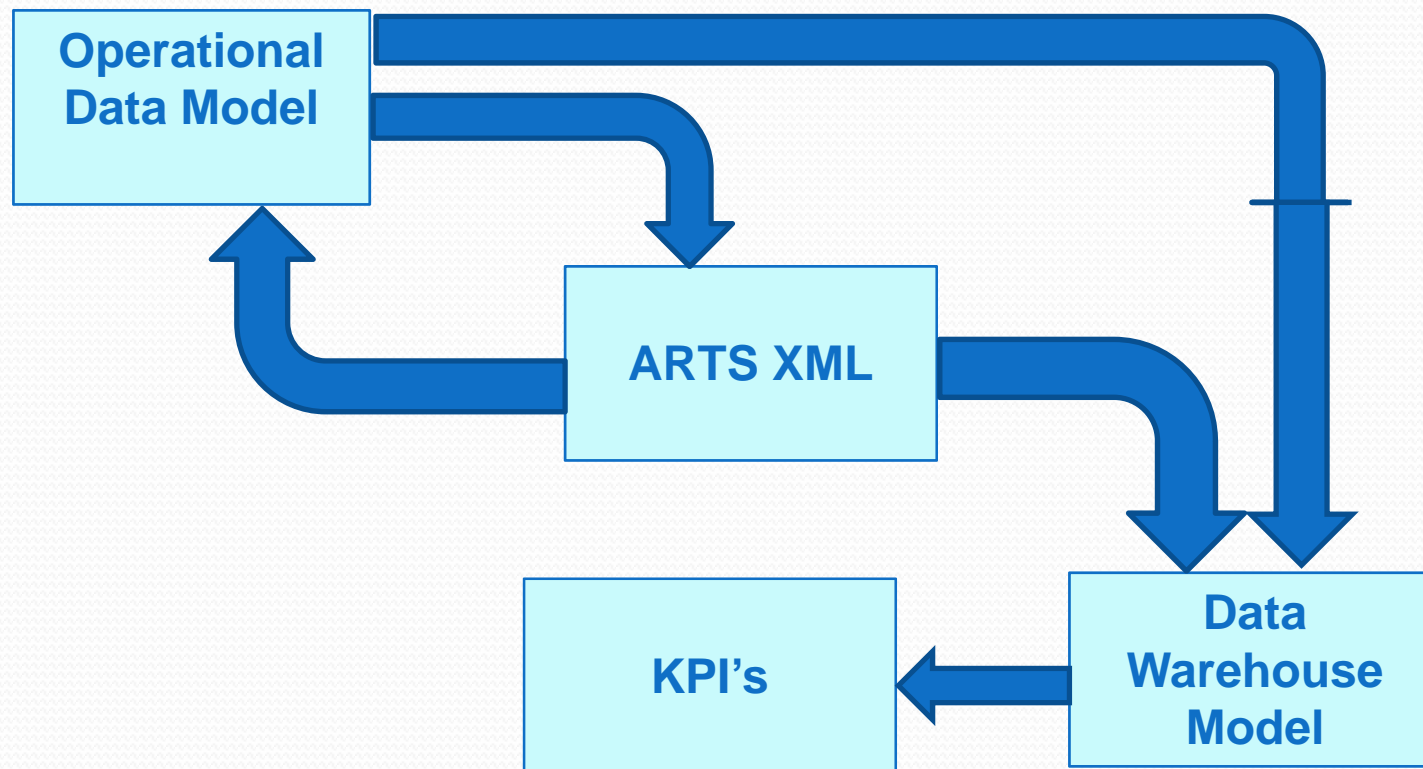
Smooth flow of data, no X-refs, standard names.

A Rich Foundation for Business Intelligence

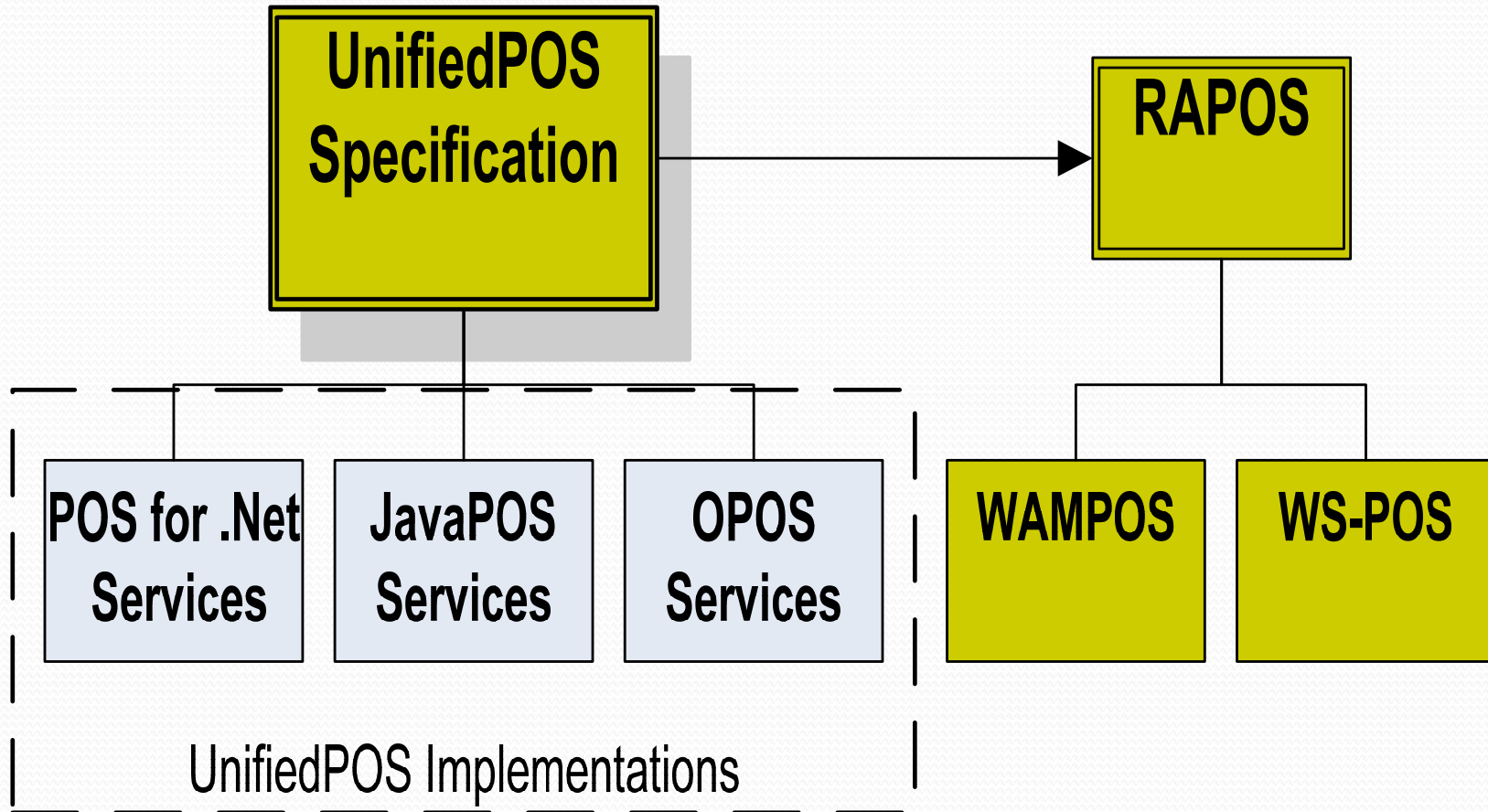
- ARTS Data Model
 - 10 Business Functions
 - 216 Subject Views
 - 632 Entities
 - 3,755 Attributes
 - 59 Domains
- ARTS XML
 - 15 Sets of standard XML messages
- ARTS Request For Proposals
 - 7 RFP(s)
- ARTS Data Dictionary
 - 27,975 Entries

Logical Progression to BI

Choose method of Operation



Unified Point of Service



UnifiedPOS - upgrade POS for:

- New business processes
- New devices: signature capture, debit card, etc
- RFID capability
- New POS application

Upgrade without expensive hardware replacement

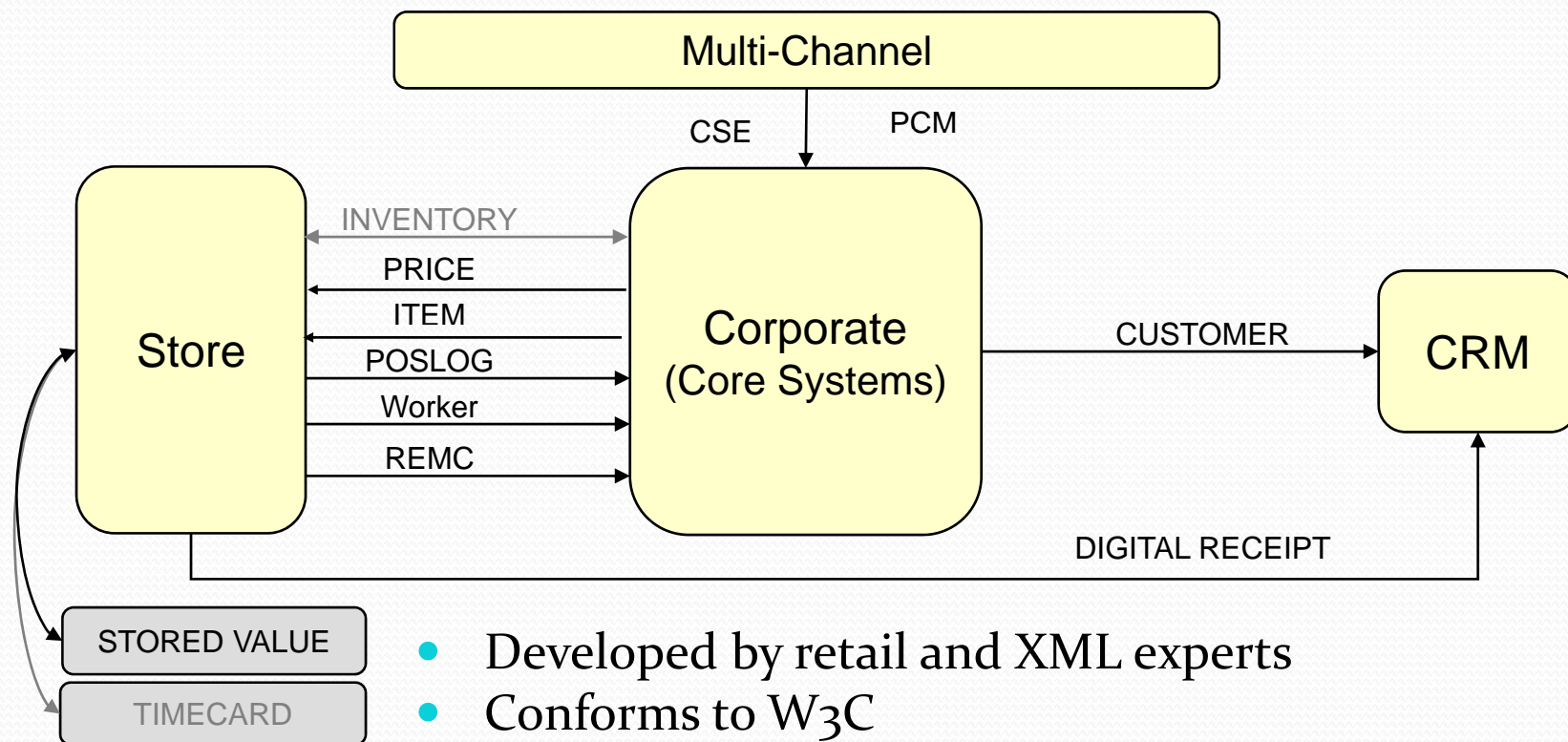
UnifiedPOS Devices

36 Devices

- Belt
- Bill Acceptor
- Bill Dispenser
- Biometrics
- Bump Bar
- Cash Changer
- Cash Drawer
- CAT
- Check Scanner
- Coin Acceptor
- Coin Dispenser
- Electronic Journal
- Electronic Value Reader/Writer
- Fiscal Printer
- Gate
- Hard Totals
- Image Scanner
- Item Dispenser
- Keylock
- Lights
- Line Display
- MICR
- Motion Sensor
- Mag Stripe Reader
- Pin Pad
- Point Card
- POS Keyboard
- POS Power
- POS Printer
- Remote Order Display
- RFID Scanner
- Scale
- Scanner
- Signature Capture
- Smart Card Reader
- Tone Indicator

ARTS XML

Application to Application (A2A) Integration



- Developed by retail and XML experts
- Conforms to W₃C
- Use GS1 and ISO standards

ARTS-XML Integration

- Completed

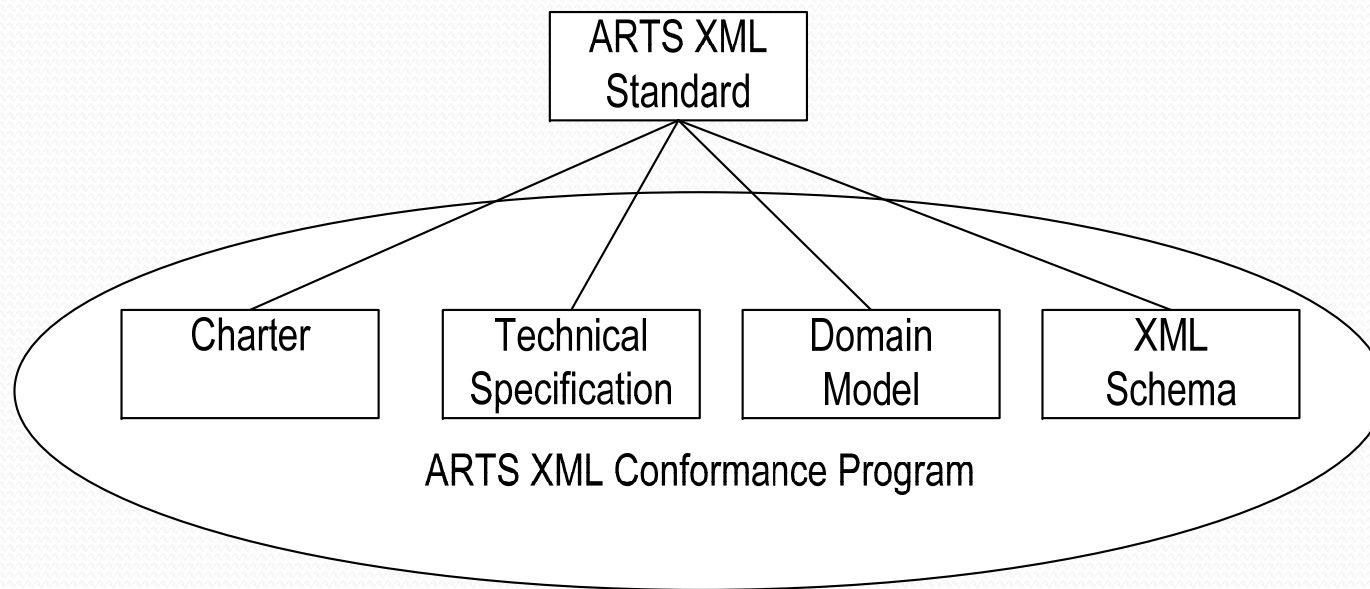
- Item
- Price V2
- Worker Mgt
- TimePunch
- POSLog V2
- REMC
- Digital Receipt
- PCM
- Stored Value
- Customer V2
- Inventory

- Completed

- NEAR
 - Pro-Con
 - POSLog for FS
 - E-commerce Data Feeds
 - Tax Transactions
 - Retail Transaction Interface
- In progress
 - Video Analytics
 - Scale Management
 - Warehouse Management

7,300+ Downloads from
76 countries

Components of ARTS XML Standards



Benefits of ARTS-XML

- Standard data definitions via Dictionary
- Multi-vendor Integration in 26 minutes
- Common understanding across developers
- Shared best practices
- ARTS Webboard, for tips and solutions
- Support for Outsourcing

RFP (ITT) Library

- Warehouse Management
- LP – POS Exception Reporting
- Signature Capture and On-line Debit
- POS Application (Release 2)
- Workforce Management (Release 2)
- Price Optimization
- Master Data Management

RFP Development Process

- Developed by Committee of Retailers, Consultants and Vendors
- Begins with previously issued RFP's
- RFP's have two sections
 - Master Agreement
 - Features and Functions
- Easily tailored to specific business models
- Free to ARTS and NRF members

More than 700 downloads by Retailers and Vendors

ARTS Standards – all retail segments

Retail Segment	UPOS	RFP's (7)	Data Model	ARTS XML (17)	Education (3)
Gen. Merch.	X	X	X	X	X
Foodservice	X		X	X	X
Grocery	X		X		X
Conv. & Petrol	X	X	X	X	X
Drug	X				X

ARTS and SOA

- SOA is a **standards based architecture** to provide application flexibility and ease integration.
- ARTS has been **developing standards** for 15 years to provide flexibility and ease integration.
- **ARTS and SOA go together like coffee and cream**



SOA Objectives

- **Agility** – Faster response to changing business practices
- **Integration** – Rapid implementation of new business applications
- **Reusable Business Logic** – assemble applications from “services”
- **Channel & Platform Transparency**

SOA Implementations

- **The Home Depot**
- **Pier 1**
- **Harrods**
- **Nordstrom**
- **World Duty Free**
- **WH Smith**
- **Carrefour**
- **J. Sainsbury**
- **JC Penney Co.**
- **Macy's**

SOA Blueprint for Retail



Answering Questions

- What does the ideal Retail SOA look like?
- What infrastructure is required?
- What logical services are required?
- What's the right granularity for services?
- How should ARTS XML docs be passed?

Deliverables

- Infrastructure Requirements (vendor neutral)
- Reference Services (logical model divided by domain)
- Use Cases

26 Work Team Members: IBM, Microsoft, Oracle, PCMS, SAP, Kohl's, BigLots

Now Available

SOA Best Practices

- **SOA Service Interface Design & Considerations**
- **SOA Service Naming Conventions**
- **Business Process Modeling Conventions**
- **UDDI Service Description**
- **Web Service Components and Recommendations**
- **XML Architecture Requirements**

Plans for 2008 – Member Survey

- Top RFP selections: Business Intelligence and International POS requirements.
- Top XML selections: Expand SOA support and Sale forecast and planning.
- 74% of respondents said ARTS should develop Mobile transaction formats.
- 87% of respondents said ARTS should create “common” SOA services.

New for 2008

- Mobile Transactions
 - Payment and Receipts
 - Are you ready for mobile?
- Video Analytics
 - LP
 - Merchandising
 - Customer Service

Supporting Activities

- Expand international chapters
- European Technology Council
- Best Practices with CIO Council
- Events
 - **Technology Summit – Berlin (Wincor)**
 - **October 15 and 16**
 - **ARTS meetings**
 - Education –On demand
 - Models
 - XML Schemas

Why Adopt – Join ARTS

- **Retailers:**

- Protect investment
- Increase ROI
 - Faster implementation
 - Lower costs
- Learn the Business

- **Vendors**

- Increase sales
- Rapid response to enhancements
- Focus on innovations and mundane

How to Join

- WWW.NRF-ARTS.org
- Dues by annual revenue
- Vendors: \$2,500 to \$5,000
- Retailers: \$1,500 to \$3,000

Remember, Why Standards ?

- Standards reduce Risk
- Standards increase Choice
- Standards speed Development
- Standards save Money

How can ARTS help you?

WWW.NRF-ARTS.ORG