DEVELOPING THE X12 XML STANDARD

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X12 XML INVOICE

- **PURPOSE**
  - **High level "conceptual" information brief on the X12 XML Invoice**

AGENDA

- **Players**
- **Objectives**
- **Approach**
- **Architecture**
- **EDI – XML Comparison**
- **XML Invoice**

PLAYERS

- **American National Standards Institute (ANSI) X12**
  - **Finance Subcommittee**
    - **Task Group 1, Work Group 5**
    - **Chairperson - Theresa Yee**
      - **XML Invoice**

PLAYERS

Bill Cafiero	GE GXS
Gary Clark	BankOne
Mary Do	Tradami Logistics, Inc.
Sherry Gajeski	MGIC
Kit Lueder	Mitre
Candace Marton	First Data Merchant Services
Wayne Mastin	Utility industry Group
Bob Parker	Logistics Management Institute
Lisa Shreve	SysCom Strategies Inc.
Mark Stuparich	Chase Bank
Bruce Svoboda	Abnamro
Byron Warren	U.S. Treasury - FMS
Theresa Yee	Logistics Management Institute

OBJECTIVES

- **Create an XML standard that:**

    1. **Easy to use by orgs of any size**

    2. **Moves towards alignment with UN/CEFACT to ultimately have 1 XML standard**

APPROACH

- **Based on:**
  - **ASC X12 Reference Model for XML Design-TR1**
    http://www.x12.org/x12org/index.cfm
  - **ASC X12 XML Design Rules**
  - **Different "types" of invoices/documents**
  - **Plug and Play Concept**

- **Alignment w/ other XML standards bodies**

- **We are NOT:**
  - **Replicating EDI 810 TS**
  - **Using every code in 810 TS**
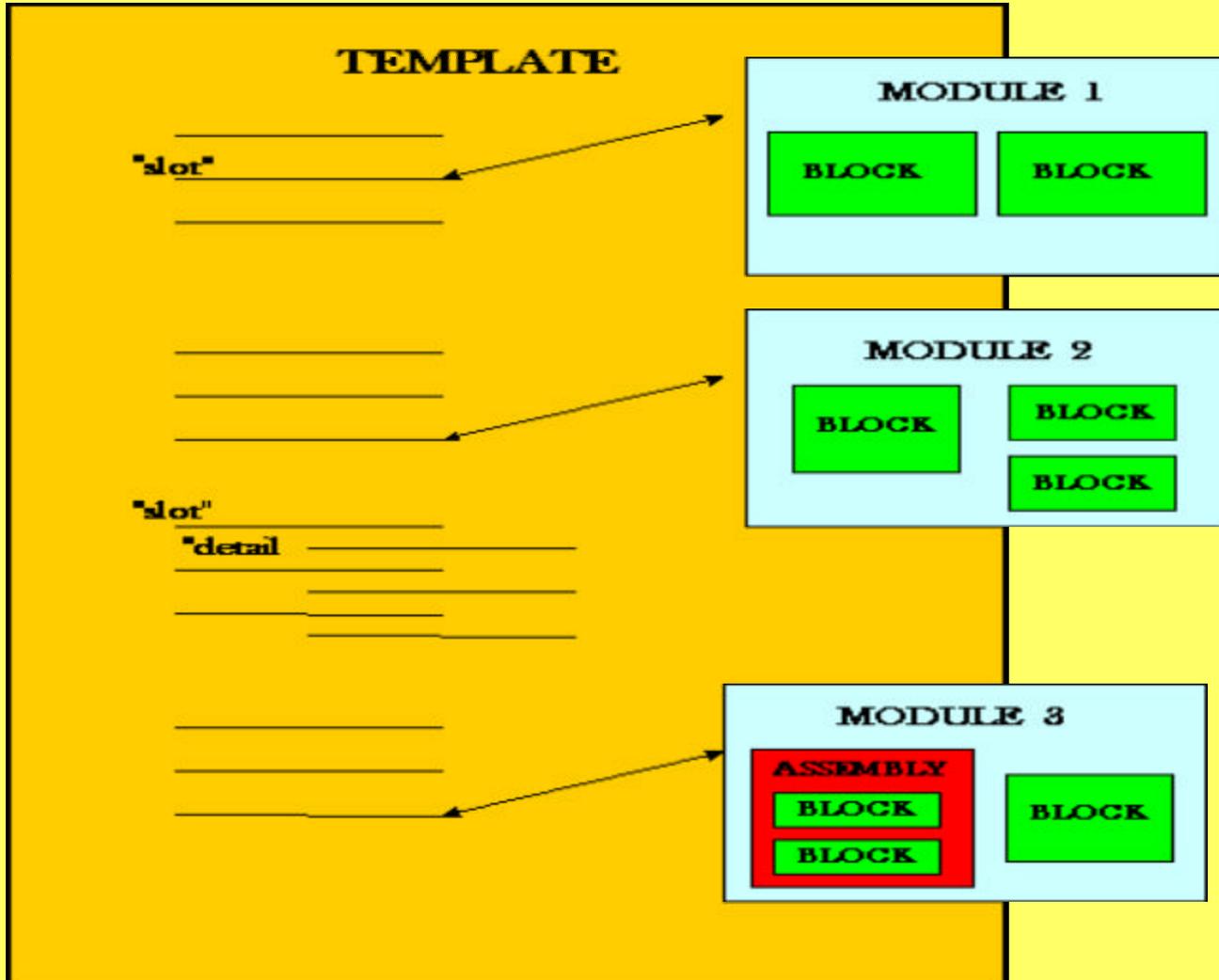
CICA

- **Context Inspired Component Architecture (CICA)**
  - **8 Layers**
    - **Template**
    - **Document**
    - **Slot**
    - **Module**
    - **Assembly**
    - **Block**
    - **Component**
    - **Primitive**
  - **Invoice layers stored in DISA DB**

STRUCTURE

STRUCTURE
CICA Architecture Layers

Layer	Definition	Example
Template	Complete process-able message containing data combined with the business context needed by business partners	XML Invoice
Document	The framework of the document with slots or placeholders for modules in the message.	Specific XML invoice with req'd sections that meets user needs
Module	Adds business context, such as special industry terminology or business process requirements or legal constraints, with the neutral data in the assembly or block into meaningful pieces of information for the business partners.	Buyer, with all of the component parts necessary to specify the Buyer role
Assembly	Links sets of blocks into coherent collections of data that businesses can reuse as needed.	An Organization with an address & party
Block	Specifies single parties, resources, events, or locations, composed of combinations of identity and characteristics components.	An Organization Party
Component	Level of detail that indicates the identity or characteristics of business data to describe parties, resources, events, or locations in a document.	Type of ID number used to specify an Organization Party, e.g., "DUNS number"
Primitive	One discrete piece of data within a component	ID Value or number

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STRUCTURE
EDI – XML COMPARISON

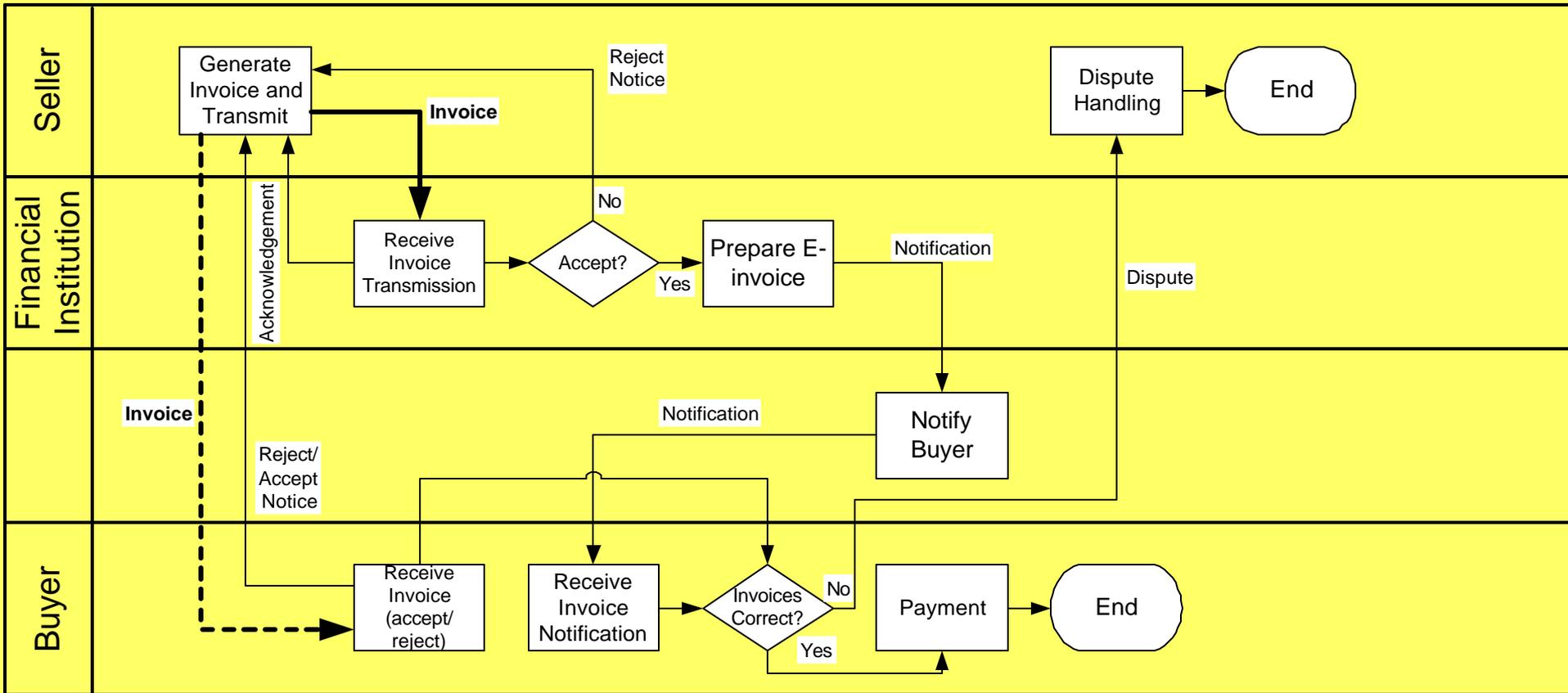| X12 EDI	CICA XML
Transaction Set	Template
Implementation Guide Implementation Convention	Document
Major Loop	Module
Minor, generic loop	Assembly
Moderate segment	Block
Single data element or composite element	Component
Single piece of data	Primitive

DIFFERENCES
EDI   vs.   XML

1. **Limited # of segments**
2. **Variable length format**
3. **REF segment overused**
4. **Requires EDI translation sftw**
5. **Requires data mapping to standard**
6. **Restricted structure**
   - **Unable to pick up a loop & put in a new message → segment collision**
7. **Relational data or "If →Then" syntax**

1. **Non-limited # of documents**
2. **Large file size**
3. **Tests to determine usage**
4. **Requires parser**
   - **Parsers not fully functional as EDI translation sftw**
5. **"Instance" Schema available on DISA website**
6. **Modular structure**
   - **"Plug & play" flexibility**
   - **Use existing structures or create new ones**
   - **Schema based on user needs**
7. **Machine Processable data**

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PROCESS MODEL X12 FINANCE

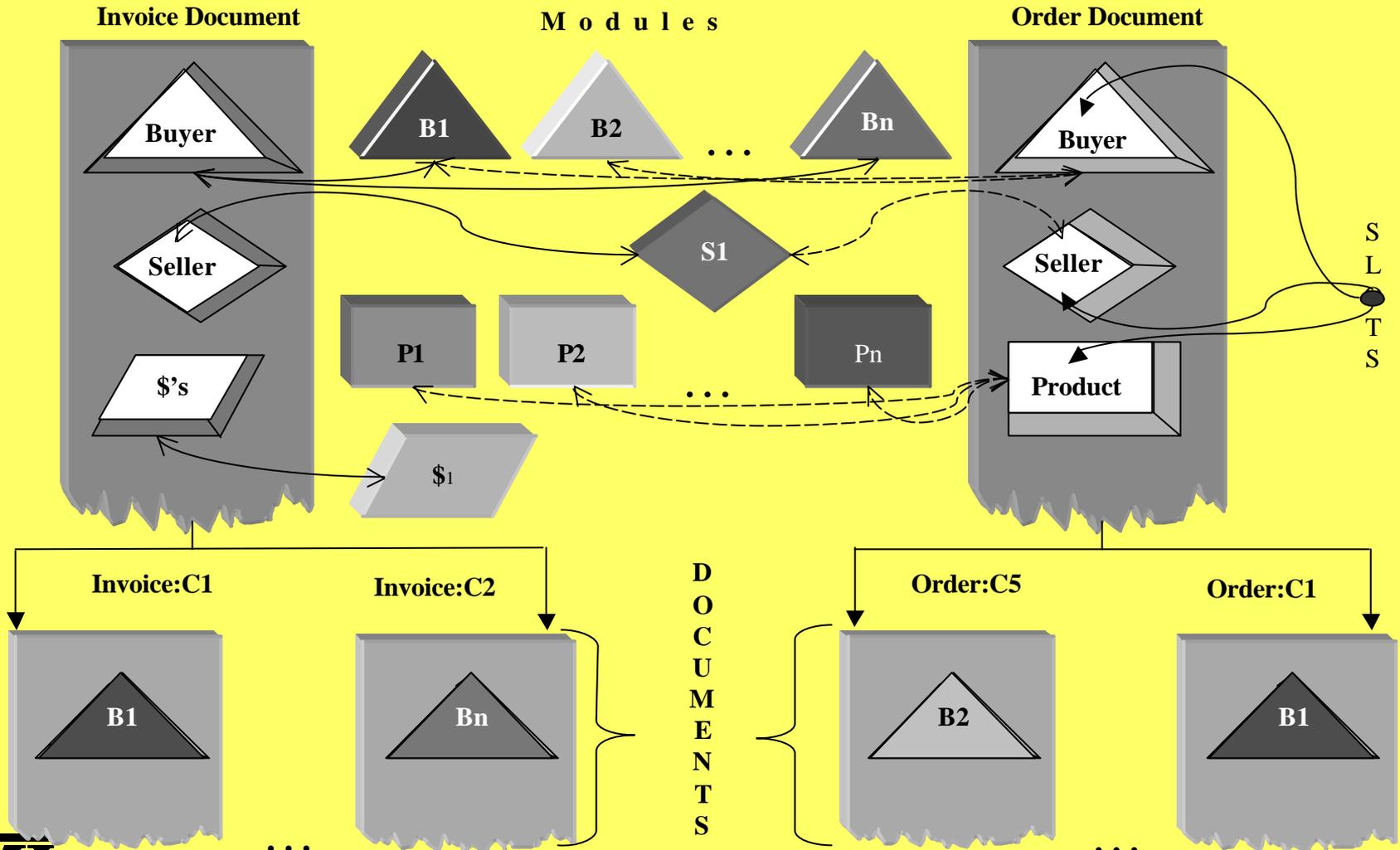## Invoice Process

* Electronic Bill Presentation and Payment (EBPP)

INVOICE DOCUMENTS

| Document	Product Oriented	Service Oriented
Delivery based	**Invoice generated upon single shipment**	**Invoice generated upon service performed**
Event based	**Invoice generated upon single shipment to multiple locations**	**Invoice generated for multiple services at conclusion of event**
Time based	**Invoice generated for consolidated shipments**	**Invoice generated for service on timed basis (i.e., monthly)**
Progress based	**Invoice generated on timed basis for period shipments**	**Invoice generated on timed basis for period services**
Balance forward	**Invoice generated for period shipments with account balance**	**Invoice generated on timed basis with account balance**
Settlement based	**Invoice generated upon pre-arranged agreements**	**Invoice generated upon pre-arranged agreements**

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BUSINESS SCENARIOS

Document A	Document B	Document C
↓	↓	↓
Module Slots	**Module Slots**	**Module Slots**
↓	↓	↓
Modules	**Modules**	**Modules**
↓	↓	↓
Blocks	**Blocks**	**Blocks**
↓	↓	↓
Components	**Components**	**Components**

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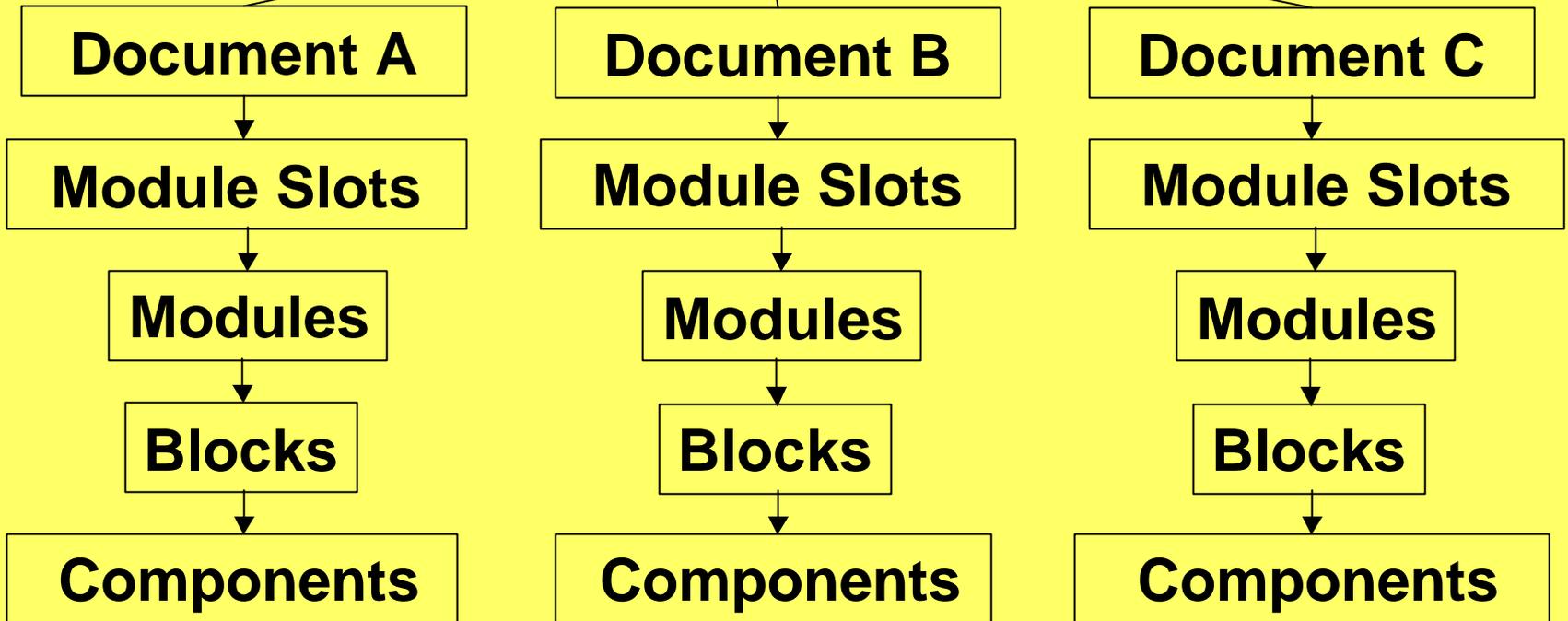
INVOICE CICA

CICA → XML

- **Determine business process**
- **Select CICA-built document/schema**
- **Send/receive automatically generated schema**

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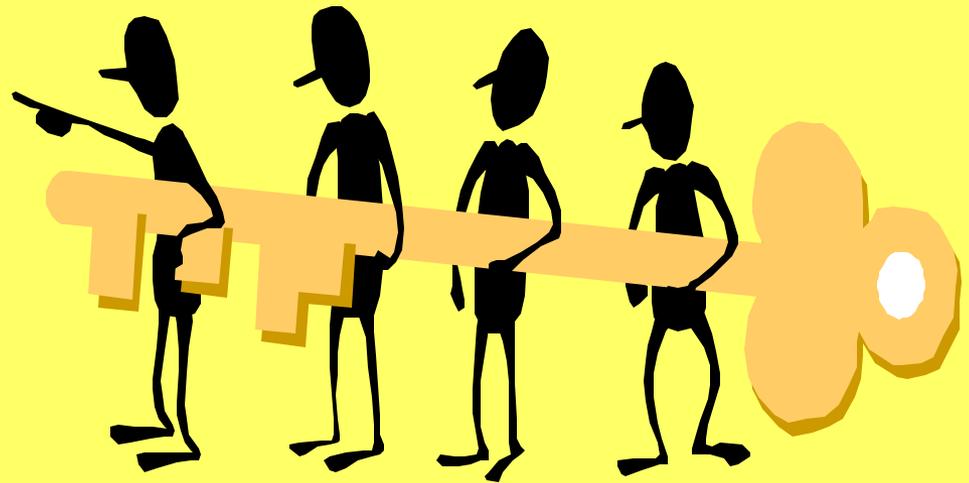
CICA Schema

- **CICA - Modular approach to building a document**

- **Consistent use of layers & modules**

- **Layers & modules become document to build schema**

FEA & CICA

- **FEA Data Reference Model (DRA) correlates to the CICA Document**
  - **Supports**
    - **Program and business line operations**
    - **Data exchange between Federal Gov & customers, constituencies, and business partners**
  - **Categorizes information along general content areas**
  - **Decomposes those content areas into greater levels of detail.**

WHERE ARE WE NOW?

- **Present**
  - **X12 Approval Procedures**
  - **X12 XML Design Rules**
  - **Refine invoice based on above**

- **Continue to build other documents**
  - **Payment Order**

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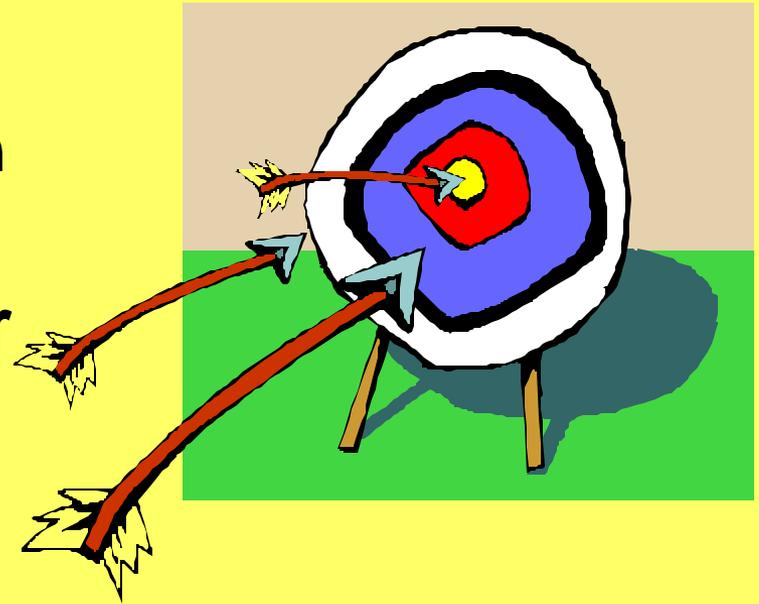
QUESTIONS
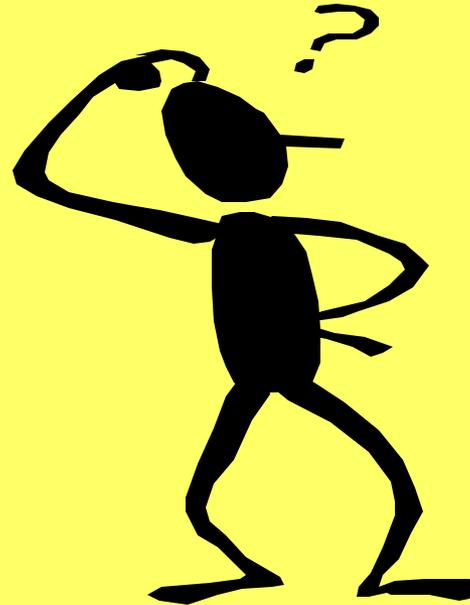
THANK YOU

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