



XML and Service Oriented Architectures

Applicazioni “business” dello standard XML

Fulvio Corno

Dipartimento di Automatica e Informatica

Politecnico di Torino

Applicazioni XML

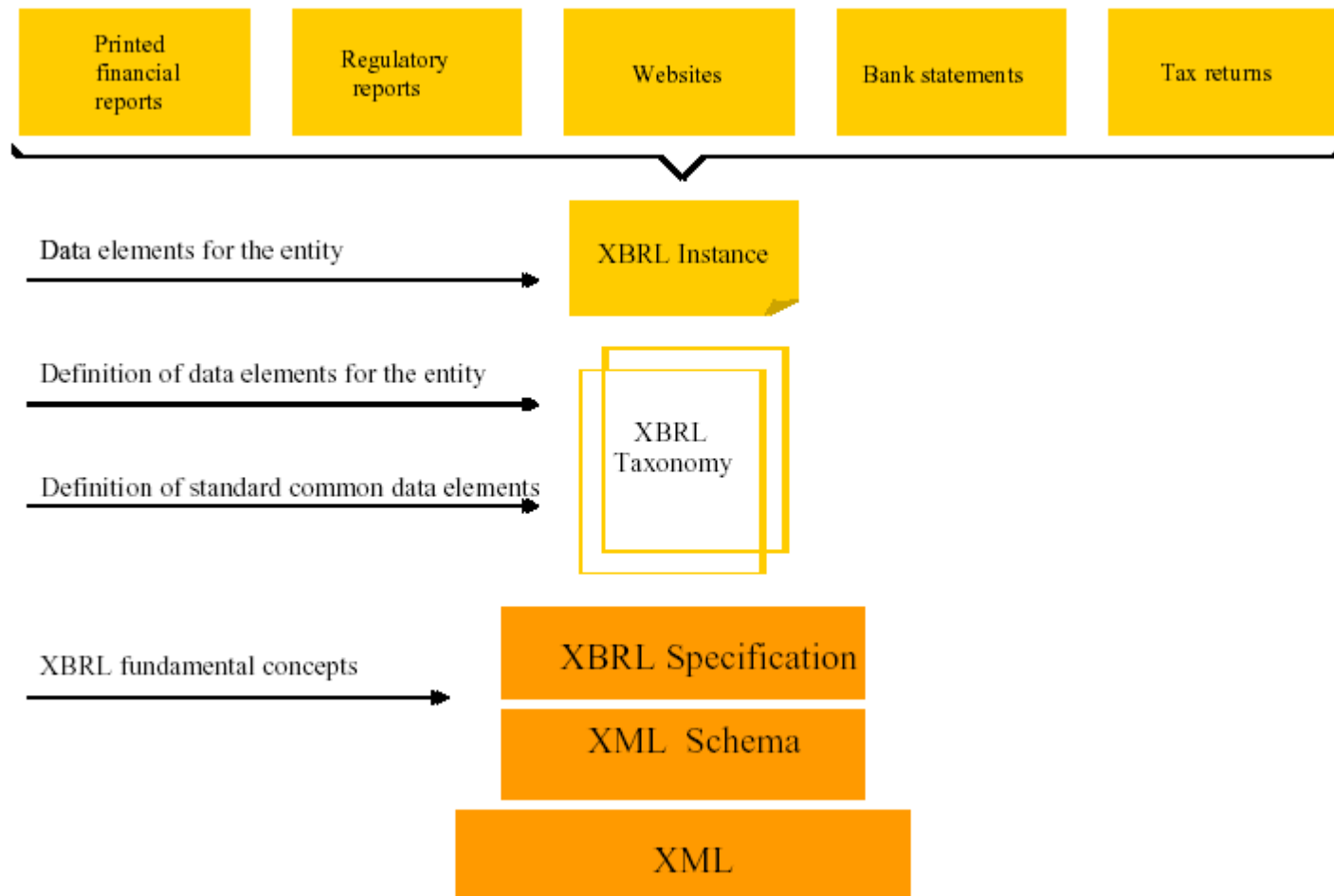
- Sulla base di XML sono stati sviluppati moltissimi linguaggi, adatti alle varie comunità di utenti e domini di conoscenza
- I linguaggi sono definiti mediante gli opportuni DTD o XMLSchema, solitamente ratificati da qualche ente di standardizzazione
- Alcuni di questi linguaggi trattano esplicitamente lo scambio di dati ed informazioni aziendali
- Vedi: <http://xml.coverpages.org/xmlApplications.html>

Linguaggi XML legati al business

- XBRL – Extensible Business Reporting Language
- ebXML – Electronic Business XML
- fmML – Financial Products Markup Language
- xCBL – XML Common Business Library
- xCML – Commerce XML
- RosettaNet
- UBL – Universal Business Language
- ...molti altri!
 - ...troppi???

- Extensible Business Reporting Language
- Creazione ed interscambio di informazioni finanziarie (annual budget, dividendi, ...)
- Nato inizialmente da AICPA (American Institute of Certified Public Accountants) e conforme ai GAAP (General American Accounting Principles) statunitensi
- Sviluppato da un consorzio di più di 400 aziende
- Formalizzazione, in XML, degli standard di reporting già esistenti
- Formalizzazione di diverse *tassonomie* adatte al financial reporting delle singole realtà nazionali/legislative, ed una tassonomia per l'internal reporting
- <http://www.xbrl.org/>

XBRL – architettura



XBRL – esempio

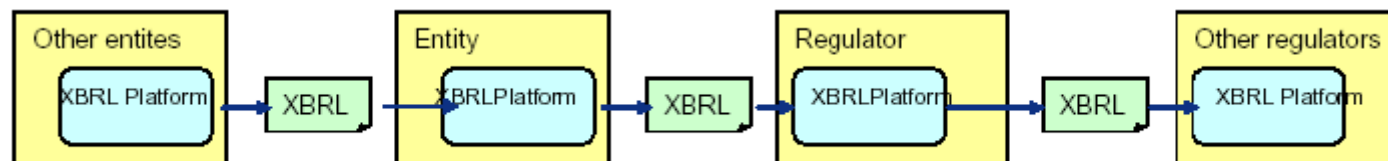


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CURRENT ASSETS

Assets Held for Sale	100,000
Construction in Progress, Current	100,000
Inventories	100,000
Construction in Progress, Current	100,000
Hedging Instruments, Current [Asset]	100,000
Current Tax Receivables	100,000
Trade and Other Receivables, Net, Current	100,000
Prepayments, Current	100,000
Cash and Cash Equivalents	100,000
Other Assets, Current	100,000
Current assets, Total	1,000,000

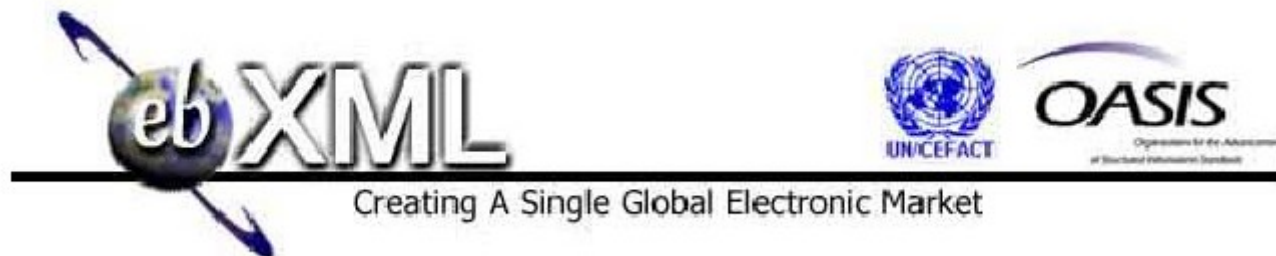


XBRL: standard

- XBRL 2.1 – 2006-12-31, corretta il 2006-12-18
 - <http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2006-12-18.zip>
 - <http://www.xbrl.org/2003/xbrl-instance-2003-12-31.xsd>
 - <http://www.xbrl.org/2003/xbrl-linkbase-2003-12-31.xsd>
 - <http://www.xbrl.org/2003/xl-2003-12-31.xsd>
 - <http://www.xbrl.org/2003/xlink-2003-12-31.xsd>
- Taxonomies - <http://www.xbrl.org/Taxonomies/>
 - Financial reporting (country-dependent)
 - Global Ledger «intended to enable the efficient handling of financial and business information contained within an organisation»

ebXML

- Electronic Business XML
- Proposto inizialmente da UN/CEFACT (United Nations body for Trade Facilitation and Electronic Business)
- Standardizzato da OASIS (Organization for the Advancement of Structured Information Standards)
- Struttura XML per scambiare dati di business
- Finalizzato alla riduzione del costo del trading in forma elettronica, in particolare per piccole e medie imprese
- <http://www.ebxml.org>



ebXML

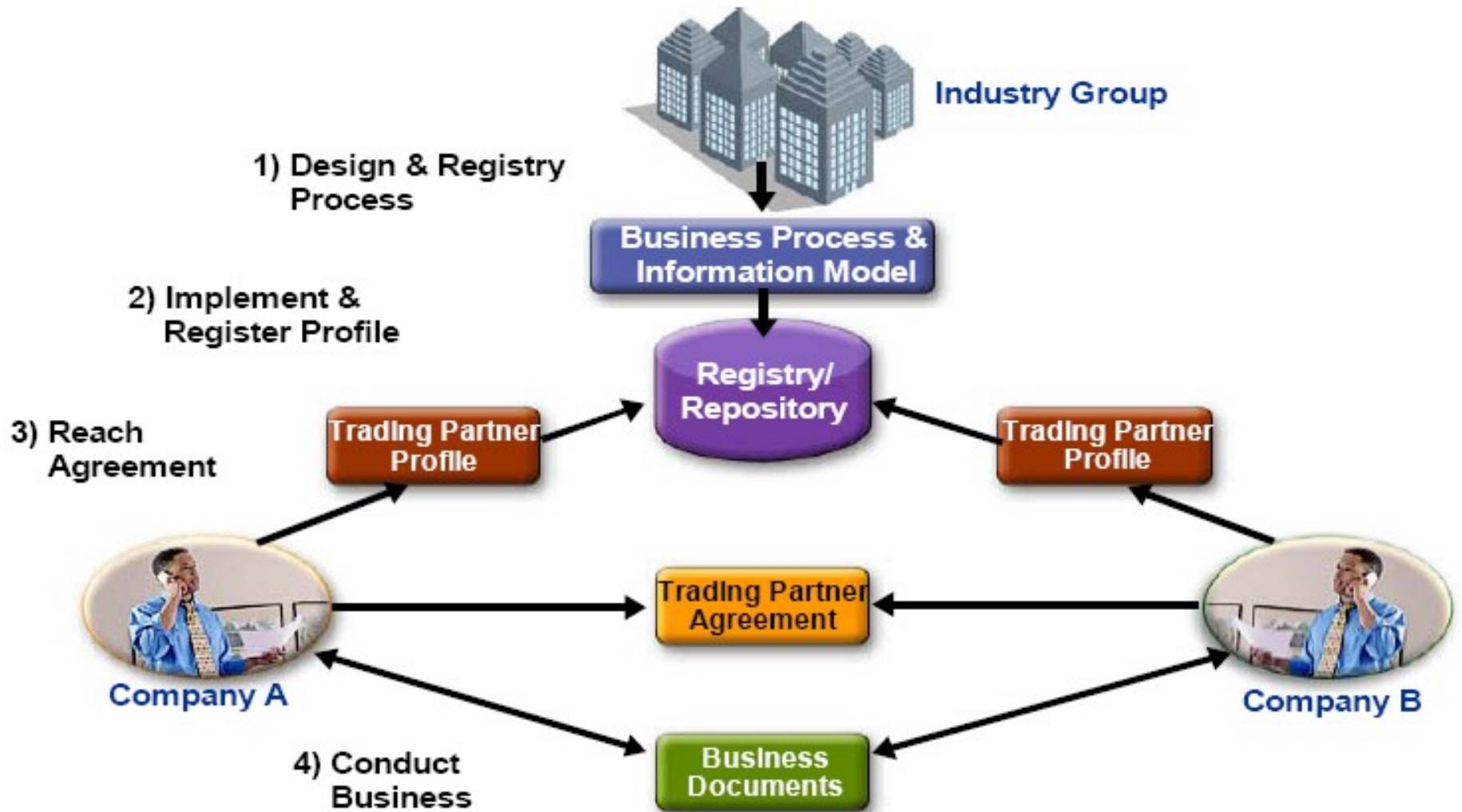
■ Vision:

- “A single set of internationally agreed upon technical specifications that consist of common XML semantics and related document structures to facilitate global trade.”

■ Motivazioni di base

- Applicabilità ad ogni tipo di business ed assoluta interoperabilità
- Possibilità di condurre transazioni elettroniche
- Supportare il mercato globalizzato
- Standard aperto e privo di royalty
- Repository pubblico per raccogliere i contributi di gruppi di utenti
- Compatibile con le soluzioni pre-esistenti

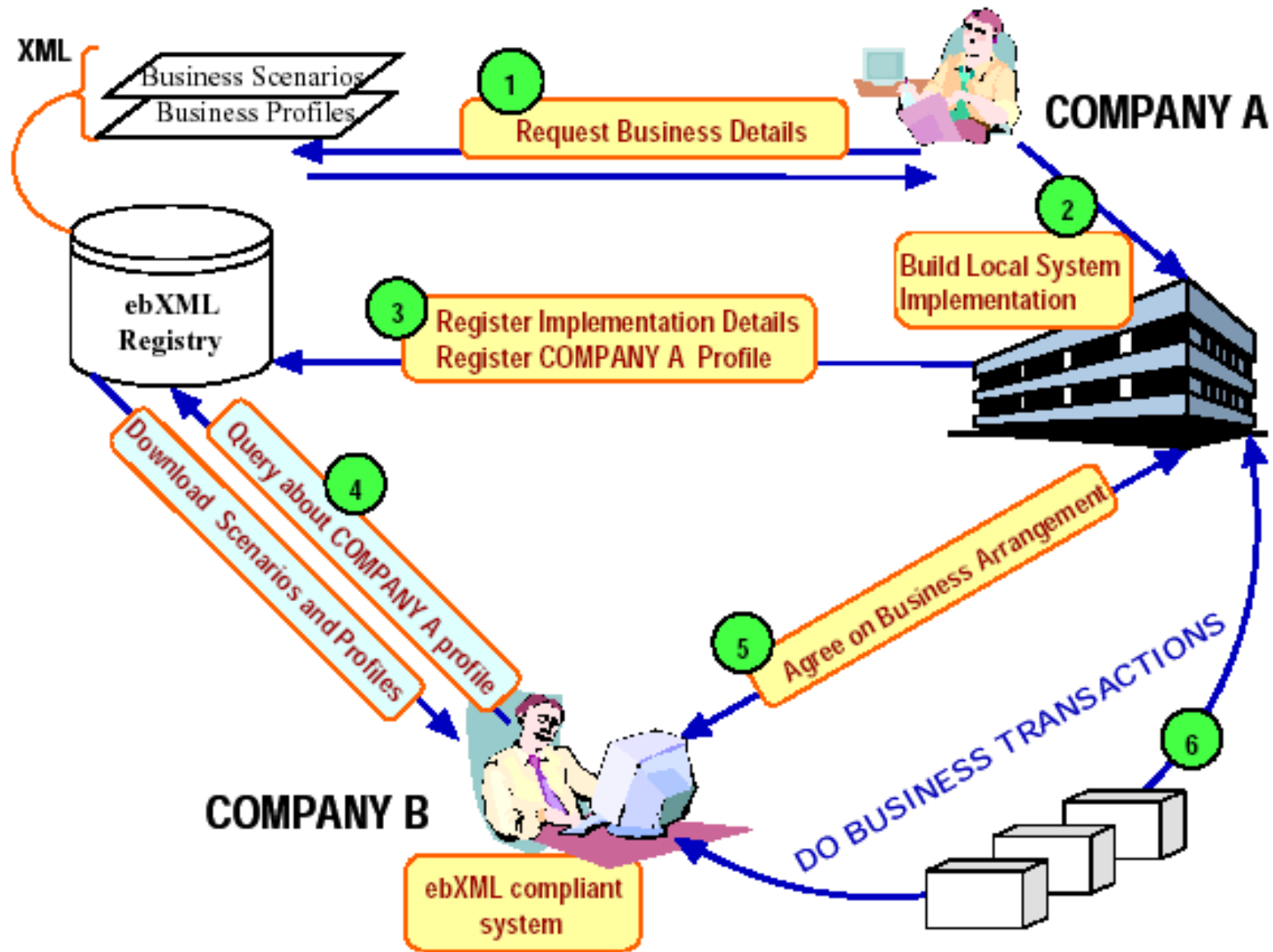
Visione



Strumenti offerti (Specifications)

- Communicate data in common terms (Core Components Technical Specification [CCTS] v2.0.1)
- Register and provide eBusiness artifacts and services (ebXML Registry Services [ebRS v3.0] and Registry Information Model [ebRIM v3.0])
- Configure technical contract between business partners (Collaboration Protocol Profile and Agreements [CPP/CPA v2.0])
- Provide secure and reliable transport (ebXML Messaging Service [ebMS])
- Enable business processes (ebXML Business Process Specification Schema, [ebBP v2.0.3])

ebXML Scenario d'uso

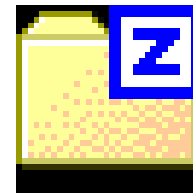


xCBL



XML
COMMON
BUSINESS
LIBRARY

- XML Common Business Library
- “the pre-eminent XML component library for business-to-business e-commerce”
- Document definitions for any e-commerce application
- <http://www.xcbl.org>



X c b l 4 0 . z i p



cXML

- Commerce XML
- Comprende:
 - Protocollo per le transazioni commerciali su Internet (basato su http)
 - Elementi di base per la descrizione delle transazioni
 - Transazioni: Profile, PunchOut, Purchase Order, Path routing, Payment, TimeCard, Master Agreement, Invoice, Catalog, ...
- <http://www.cxml.org>

Document	DTD
Basic cXML documents	<a href="http://xml.cXML.org/schemas/cXML/<version>/cXML.dtd">http://xml.cXML.org/schemas/cXML/<version>/cXML.dtd
Confirmation and Ship Notice	<a href="http://xml.cXML.org/schemas/cXML/<version>/Fulfill.dtd">http://xml.cXML.org/schemas/cXML/<version>/Fulfill.dtd
Invoice	<a href="http://xml.cXML.org/schemas/cXML/<version>/InvoiceDetail.dtd">http://xml.cXML.org/schemas/cXML/<version>/InvoiceDetail.dtd
Type Definition	<a href="http://xml.cXML.org/schemas/cXML/<version>/Catalog.dtd">http://xml.cXML.org/schemas/cXML/<version>/Catalog.dtd
Payment Remittance	<a href="http://xml.cXML.org/schemas/cXML/<version>/PaymentRemittance.dtd">http://xml.cXML.org/schemas/cXML/<version>/PaymentRemittance.dtd

RosettaNet

- “RosettaNet develops universal standards for the global supply chain”
- Obiettivi:
 - Reductions in cycle time
 - Reductions in inventory costs
 - Improved productivity through automation
 - Measurable supply chain ROI
- Propone diversi standard
 - RosettaNet Partner Interface Processes® (PIPs®) define business processes between trading partners
 - Dizionari: Business, Technical
 - Framework tecnico di implementazione
- <http://www.rosettanel.org/>

UBL

- Universal Business Language
- Sforzo per standardizzare ed unificare i molti dizionari oggi disponibili
- Sviluppato a partire da cXML, xCBL, EDI, RosettaNet, OAGIS, ...
- Di fatto, soppianta xCBL ed è compatibile con ebXML
- <http://www.oasis-open.org/committees/ubl/>
- Disponibili UBL 2.0

UBL Overview

- UBL, the Universal Business Language, is the product of an international effort to define a royalty-free library of standard electronic XML business documents such as purchase orders and invoices. Developed in an open and accountable OASIS Technical Committee with participation from a variety of industry data standards organizations, UBL is designed to plug directly into existing business, legal, auditing, and records management practices, eliminating the re-keying of data in existing fax- and paper-based supply chains and providing an entry point into electronic commerce for small and medium-sized businesses.

UBL document types

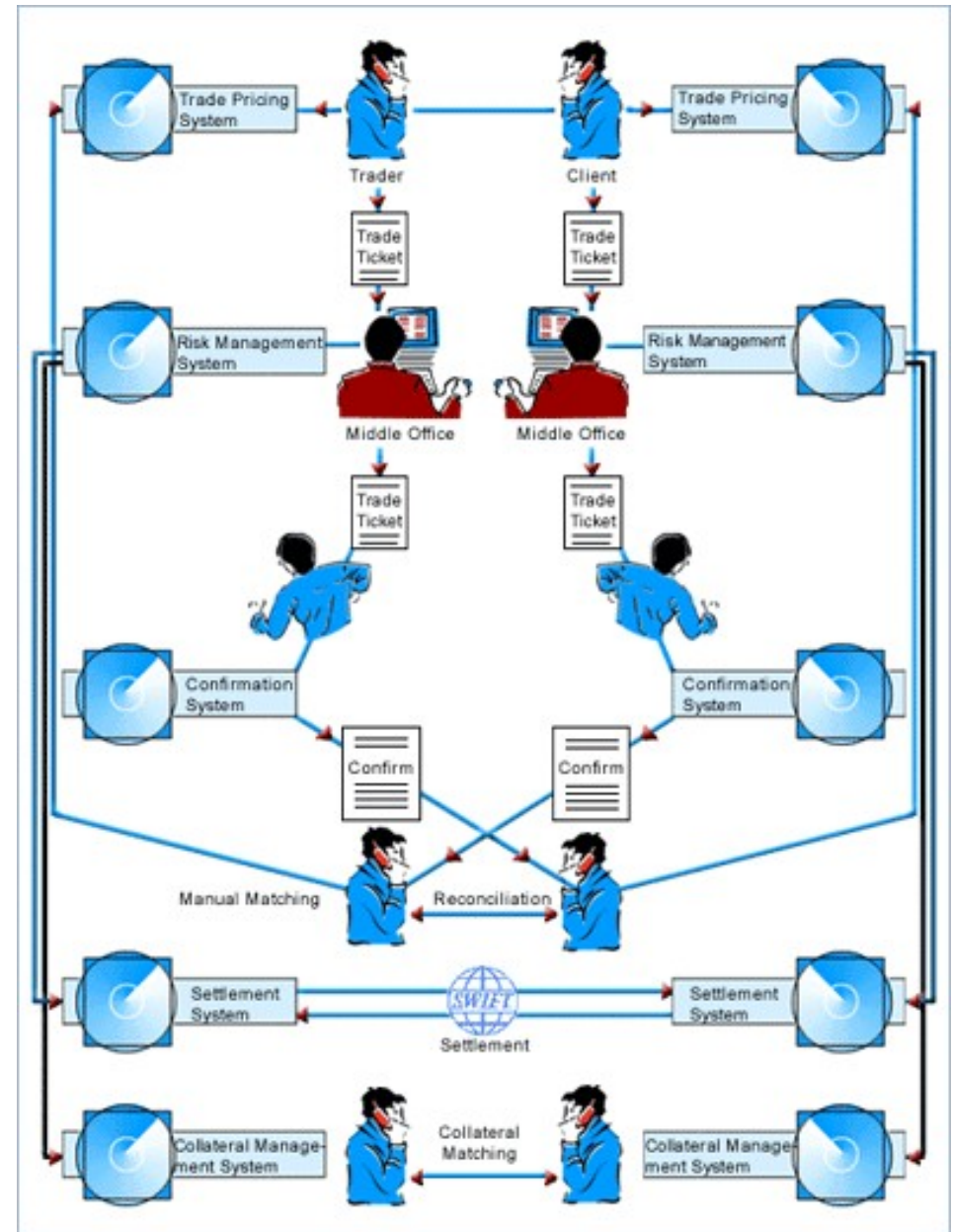
- ApplicationResponse
- AttachedDocument
- BillOfLading
- Catalogue
- CatalogueDeletion
- CatalogueItemSpecificationUpdate
- CataloguePricingUpdate
- CatalogueRequest
- CertificateOfOrigin
- CreditNote
- DebitNote
- DespatchAdvice
- ForwardingInstructions
- FreightInvoice
- Invoice
- Order
- OrderCancellation
- OrderChange
- OrderResponse
- OrderResponseSimple
- PackingList
- Quotation
- ReceiptAdvice
- Reminder
- RemittanceAdvice
- RequestForQuotation
- SelfBilledCreditNote
- SelfBilledInvoice
- Statement
- TransportationStatus
- Waybill

fpML

- Financial Products Markup Language
- Interscambio di informazioni finanziarie
 - Es.: tassi di interesse scambiati, accordi sull'evoluzione dei tassi futuri, ...
- Adatto a prodotti finanziari complessi
 - The XML Standard for Swaps, Derivatives and Structured Products
- <http://www.fpml.org>

fpML Scenario

- Prodotti finanziari derivati
 - A derivative is a risk-shifting agreement, the value of which is derived from the value of an underlying asset
- Over-the-counter (OTC) derivatives, o swaps
 - customized, privately negotiated derivatives
- Futures
 - standardized, exchange-traded derivatives



Altri standard...

- PDML - Product Data Markup Language
 - Scambio dei dati sui prodotti tra aziende ed enti governamentali
- SMBXML – Small to Medium Business XML
 - www.smbxml.org
- FinXML – Financial XML
 - Sviluppato dal Financial Consortium per scambio di informazioni finanziarie tra istituti di finanza
 - www.finxml.org
- FixML – Financial Information Exchange Markup Language
 - Standard sviluppato da oltre 20 aziende finanziarie per scambi di dati tra istituti finanziari
 - www.fixprotocol.org