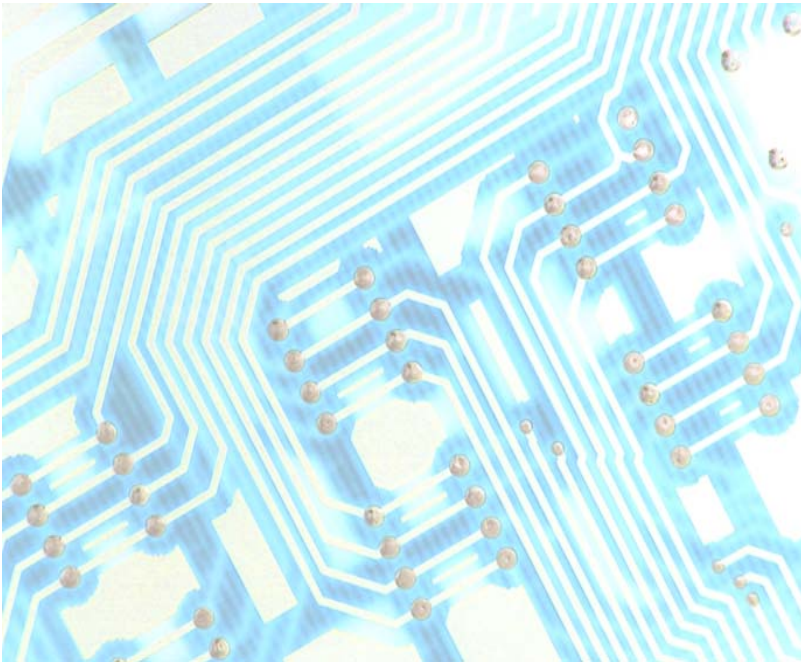


Embedding Legal Contract in Demand Supply Network

– EDIFICE Plenary 2002 –



**Legal contract issues in e-business
transformation towards automated transacting;
enabling future demand supply network**

- **INTRODUCTION**
- **LAW AND TECHNOLOGY**
- **TRANSACTING WITH EDI & XML**
- **EMBEDDING LEGAL CONTRACT**
- **CONCLUSIONS**

Usva Kuusiholma

[usva.kuusiholma@hut.fi]

2002



HELSINKI UNIVERSITY OF TECHNOLOGY



Introduction

SoberIT:

✓ **The Software Business and Engineering Institute** is a unit of the Department of Computer Science at Helsinki University of Technology (www.soberit.hut.fi)

✓ **SoberIT research** covers a broad set of topics, including, but not limited to:

- ✓ Software product business
- ✓ Distributed product development
- ✓ Digital economy
- ✓ Product data management
- ✓ Information ergonomics
- ✓ Legal and contractual issues.

✓ **Focus** is to improve the global competitiveness of the Finnish software industry by providing world-class education and research.

Usva Kuusiholma:

✓ **Researcher** of Law and Technology and Digital Economy at the Helsinki University of Technology (www.hut.fi)

✓ **Program Manager** of the Information and Communication Technology Enabled Commerce Program (ICTEC) at the Software Business and Engineering Institute at the Helsinki University of Technology (www.soberit.hut.fi)

✓ **Expert Member** of the Legal Working Group at the United Nations Centre for Trade Facilitation and Electronic Business (CEFACT)

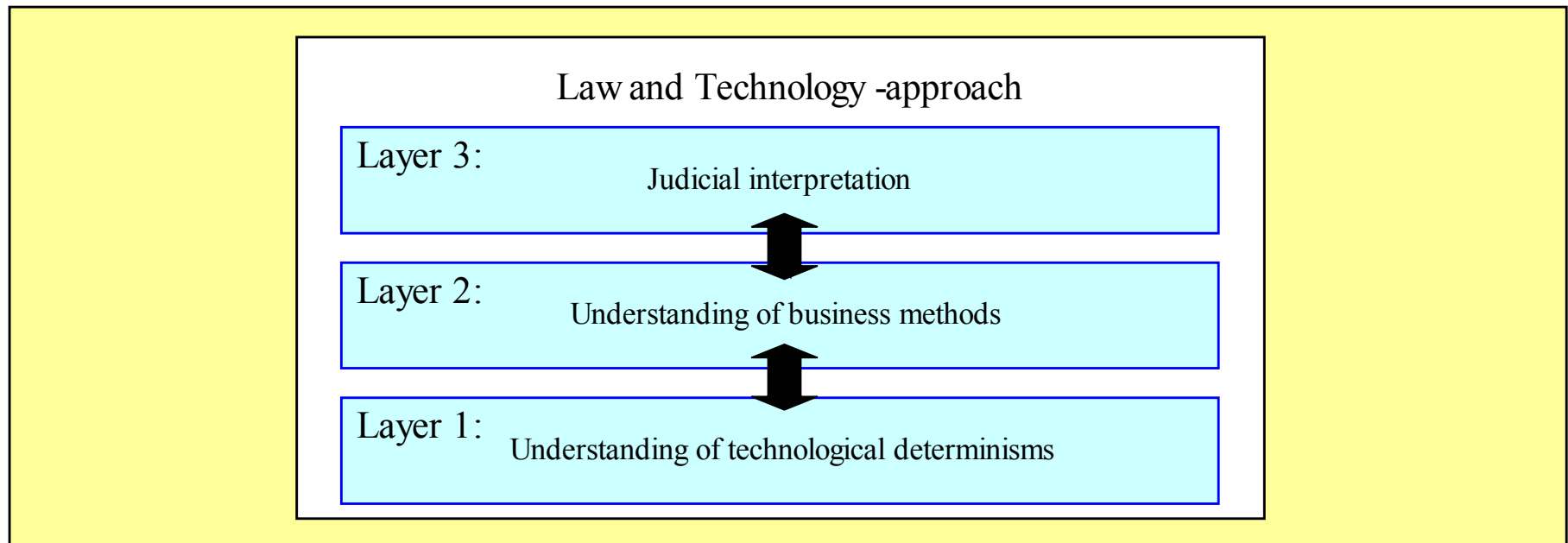
✓ **Focus of interests** is in the convergence of law and digital economy



Law and Technology

”Law and Technology” –Approach

- ✓ **Understanding** technology in the level of processes
- ✓ **Understanding** the new business methods –concepts
- ✓ **Legal interpretation** according the legal theory



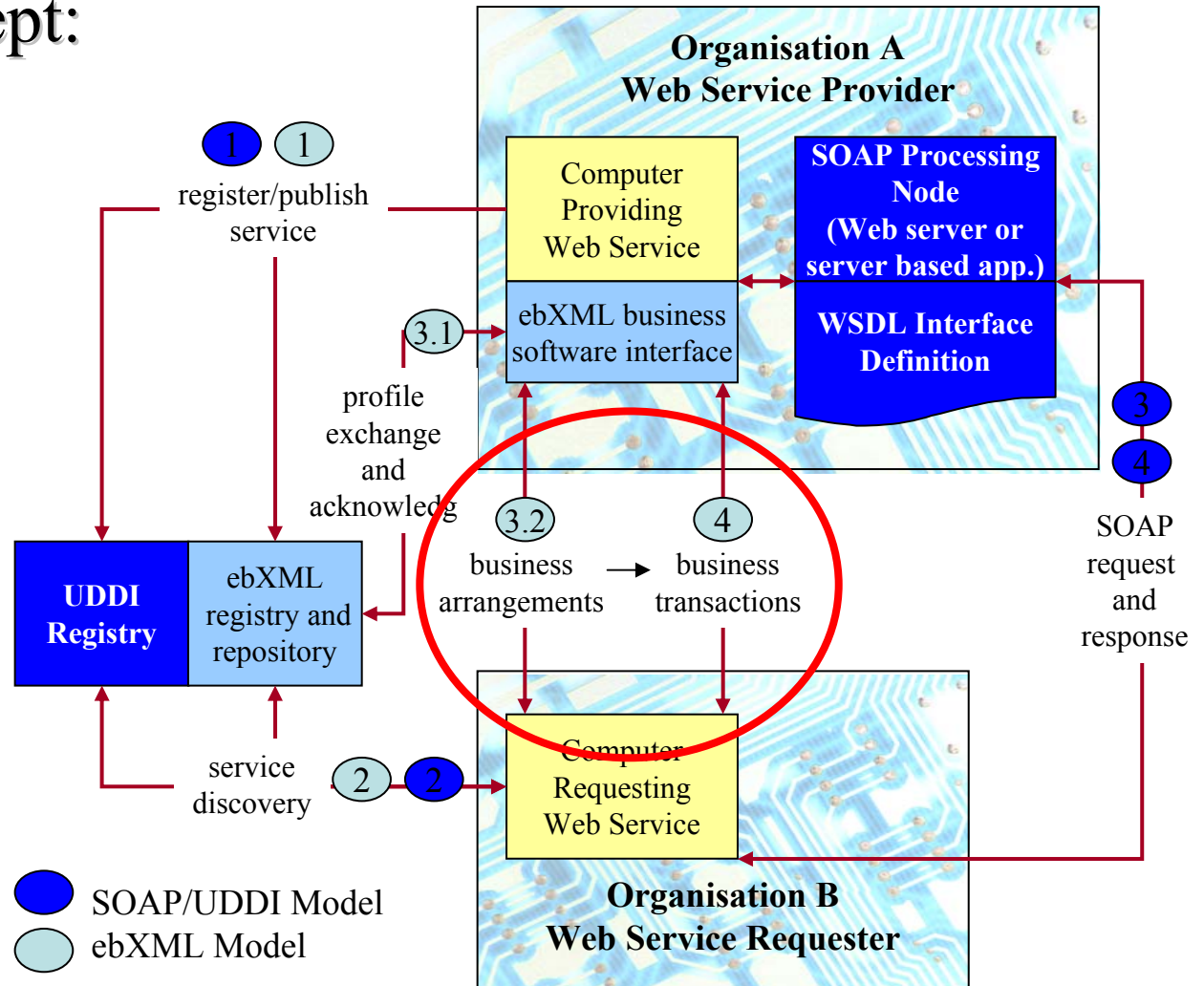


Introduction

Web Service Concept:

A service provider (i) **creates a Web Service** and (ii) uses WSDL to **describe the service**, and then:

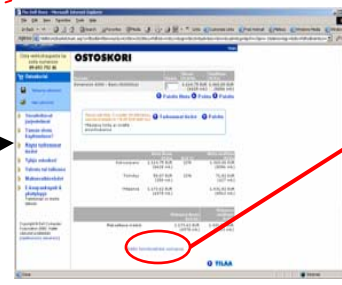
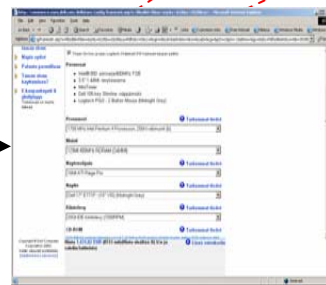
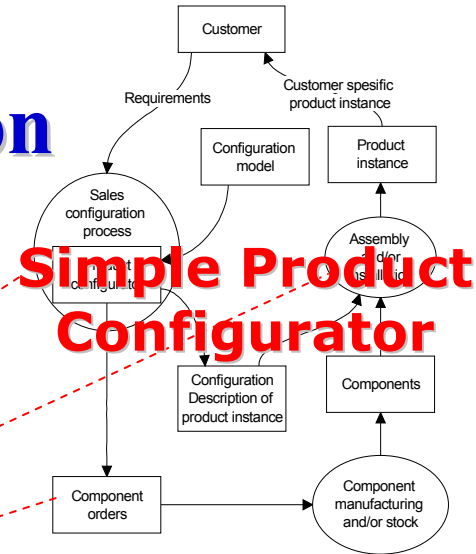
1. The service **provider registers the service** (in a UDDI registry and/or ebXML registry/repository)
2. Another service or **requester locates and requests** the registered service by querying UDDI and/or ebXML registry(-ies)
3. The **requester uses an application to bind the registered service** using SOAP (if UDDI) and/or ebXML, and
4. **Data and messages are exchanged as XML** over HTTP (e.g., ebXML, RosettaNet)





Introduction

Example 1: Present day in XYZ



Hmm. I want to buy a new computer from www.xyz.com. I'm going to choose the new XYZ 8200.

Oh, I can configure the product from different components 😊

And here is the list of software and hardware items that I've chosen for my 8200. The price is reasonable, so I'll buy it by clicking OK.

" Before We at XYZ can take your order, You have to agree on these *standard legal contract terms*. **Yes or No?** " I think I have to agree *as is*, or they won't ship the product 😞...Yes.



Introduction

Example 1:

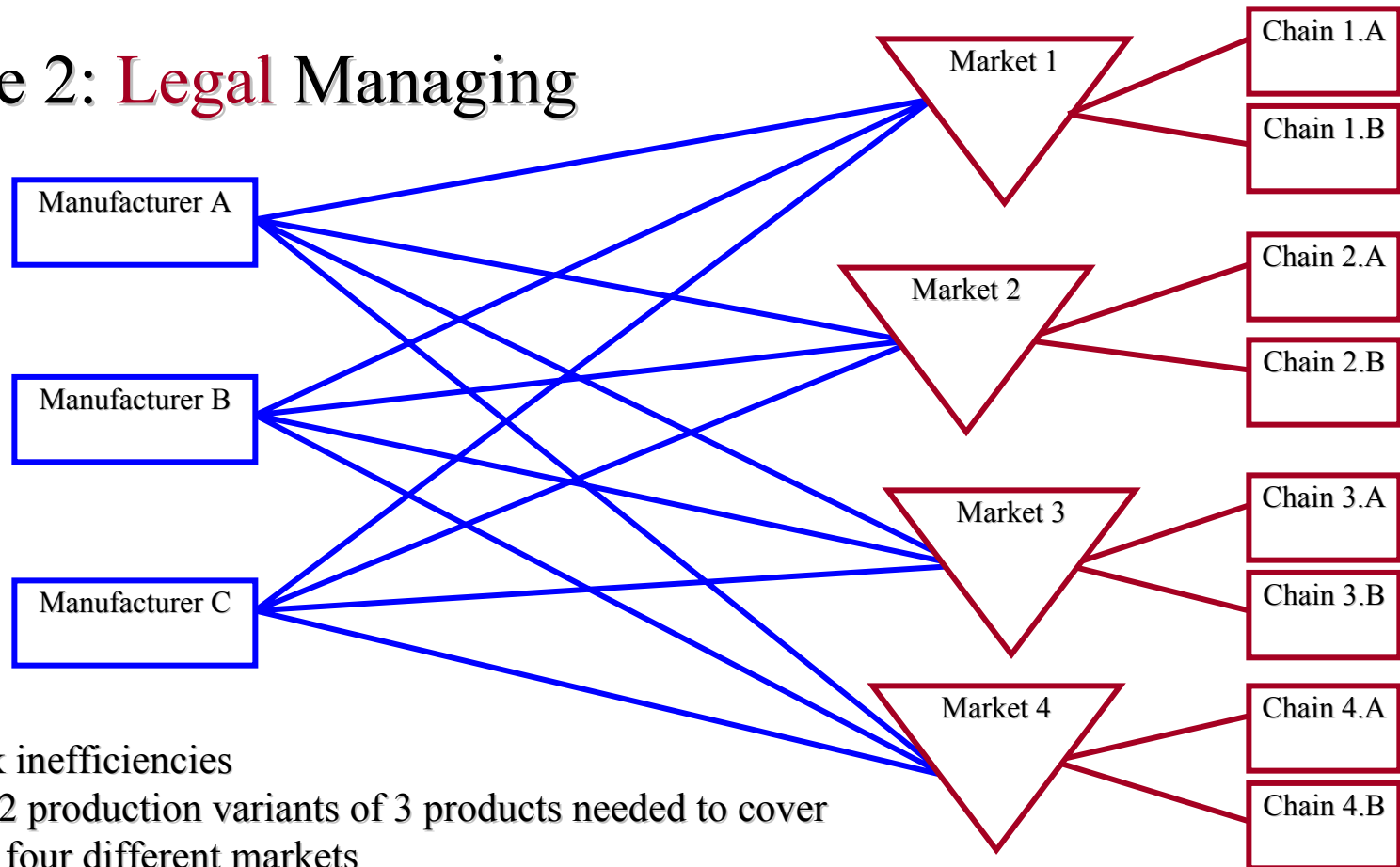
The legal contract in present day is done according XYZ's Standard Legal Contract Terms and can be compared to configured one as follows:

	Standard	Configured
Focus of intrepetation	The fair use of standard contract	The mutual understanding between parties
Risk allocation	Is based on fair use of risk allocation on common situation	Is based on "known" understanding of risk allocation between parties
Dissembly of Contract	Individual changes from common used standard contract are dealt with HIGH precaution in legal intrepetation	<u>Contract is always assembled</u> , so it won't be compared to other similar contract (unless HIGH unreasonability is noted)



Introduction

Example 2: Legal Managing

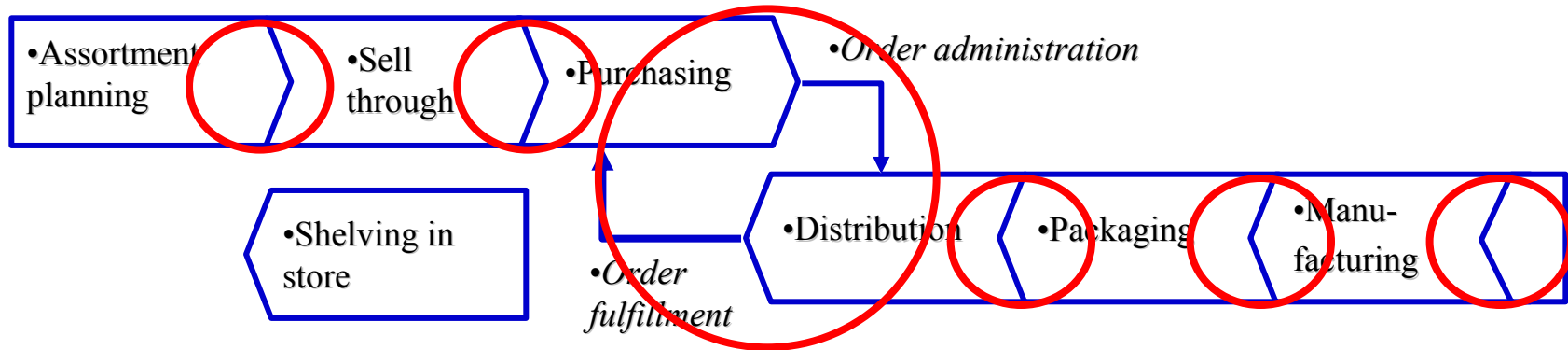


- ✓ Network inefficiencies
 - ✓ 12 production variants of 3 products needed to cover the four different markets
 - ✓ 8 variants of shop displays
 - ✓ **Excessive contracting between parties at each stage of the demand supply network to secure risks**

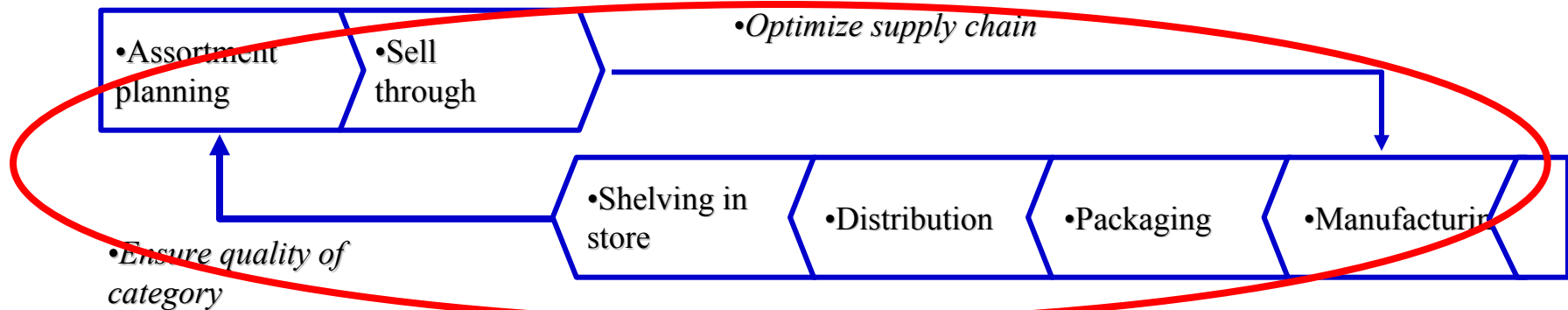


Introduction

Example 3: Legal Visibility



- Use legal visibility to manage value network, “buy” production more time in product introductions and streamline demand supply operations from legal constraints





Introduction

What is e-Contract:

- ✓ **eBusiness-as-usual**, buyers and sellers; products and services
- ✓ **Machine-readable** semantic representation of the legal obligation between parties
- ✓ **Used in:**
 - ✓ Computer supported negotiation
 - ✓ Computer supported fulfillment
- ✓ **Natural language or formal representations**

What is not e-Contract:

- ✓ **Interface descriptions**
 - ✓ Electronic information exchange relations
 - ✓ The terms and conditions under which the Parties using electronic information exchange for their transaction operate
- ✓ **Other unilateral commitments to unknown parties**
- ✓ **Trading Partner Agreements** that describe these transaction methods !!!



Introduction

Agile Contract:

	Traditional contract	Agile contract
Focus and perspective of evaluation	Failure oriented and backwards looking	Success oriented and forward looking
Mode of attachment to the content of the activity	Single acts; complete rights and duties (outcomes)	Governance systems in networks; risk positions
Mode of attachment to the structure of the activity	Documents	Objects (“core components”)
Mode of governance of mass contracts	Standard forms	Planned customer profiling




Transacting with EDI

Bilateral B2B:

- ✓ **EDI** had disadvantages in terms of
 - ✓ low level of message-type specifications,
 - ✓ time-consuming and expensive case-by-case implementation gateways for new message types, and
 - ✓ expensive software and leased lines
- ✓ **Focusing** on simple tasks between large organizations.

Use of Frame Agreements:

- ✓ **Trading Partner Agreements (TPA)** that described the EDI methods
 - ✓ **Contractual Frame Agreements** between parties that described the contractual obligations
- 
- ✓ **Transaction costs** for making these legal agreement were not substantial, if compared to the cost of system integration for each transaction type



Transacting with XML

One-to-Many B2B:

✓ Web Services

- ✓ Use of RosettaNet, ebXML...
- ✓ Computer supported negotiation
- ✓ Computer supported fulfillment

✓ **Business-as-usual**, buyers and sellers; products and services

✓ **Machine-readable** semantic (XML) representation of the products and services

Near Future:

✓ **Use of UDDI, ebXML registry&reposit.**

- ✓ Computer supported recognition

✓ **Use of ebXML CPA**

- ✓ Computer supported TPA's

Transaction is Legal Contract

✓ **Transaction costs** for making traditional legal agreement are substantial, if compared to the cost of system integration for one-to-many



✓ **Change in functional framework** for business operations, where legal obligations can be recognized in new way of transacting, i.e. legal contract

✓ **Evidence** for existing contract from;

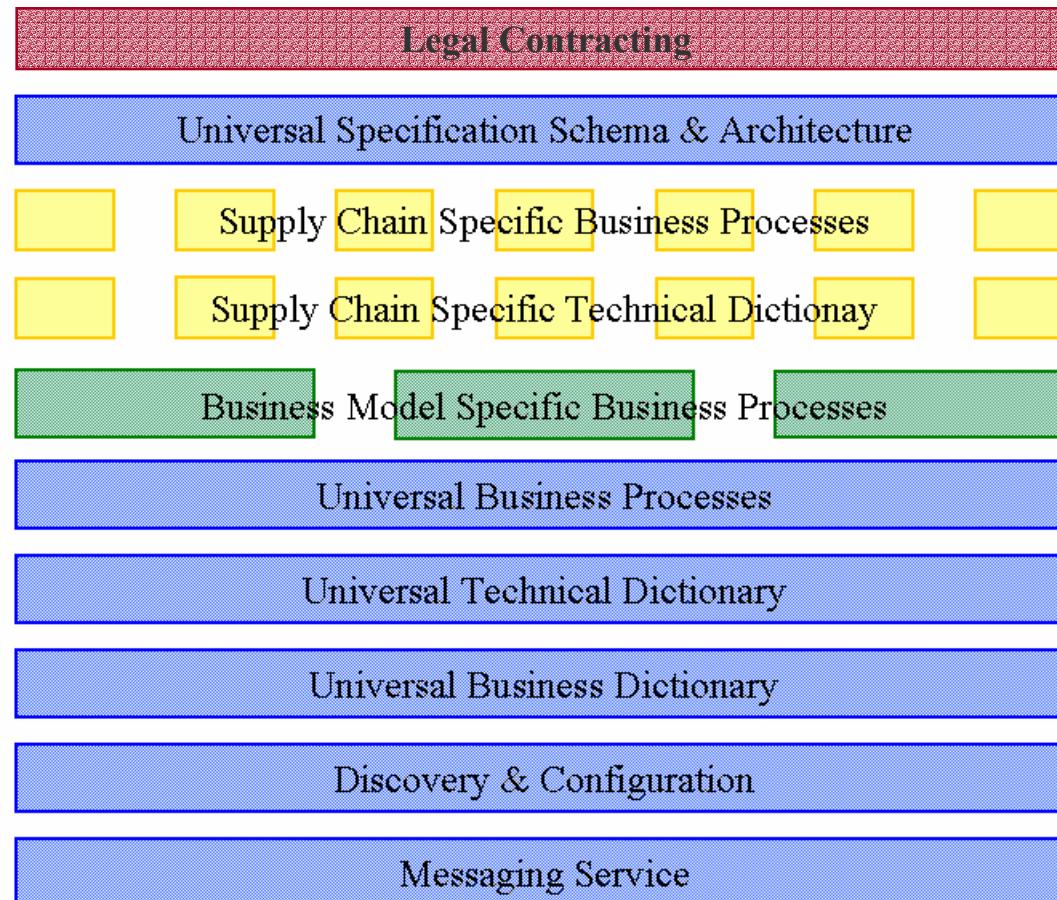
- ✓ Commercial setting,
- ✓ Purpose **and**
- ✓ Effect

✓ **TPA's** are technical question, not legal problems !



Transacting with XML

Present Contract Approach for Demand Supply Network:





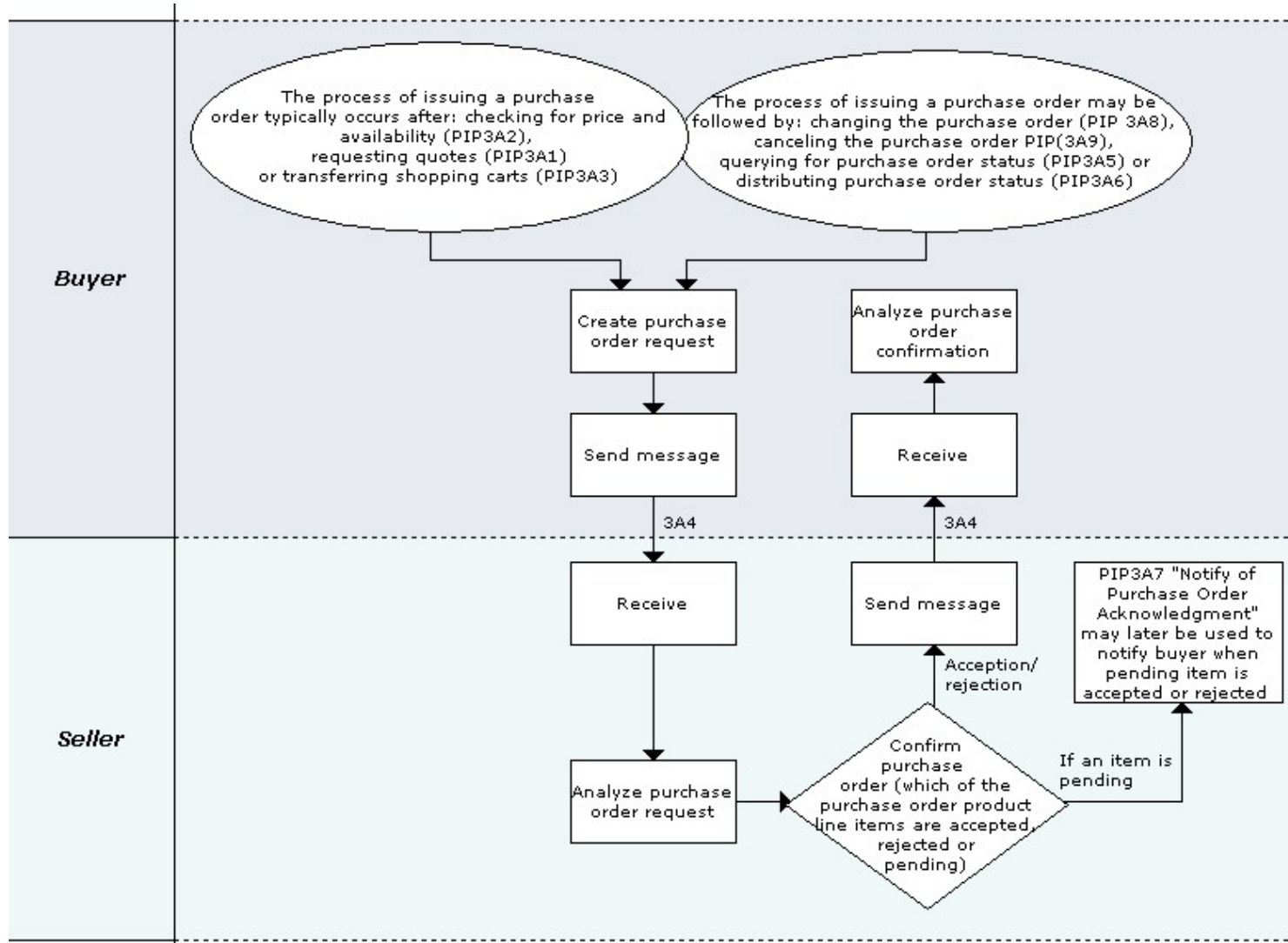
Is there contractual obligation when using standard business processes?



Example: Transacting with ROSETTANET

Lingua franca for eBusiness

PIP 3A4 Business Process Model

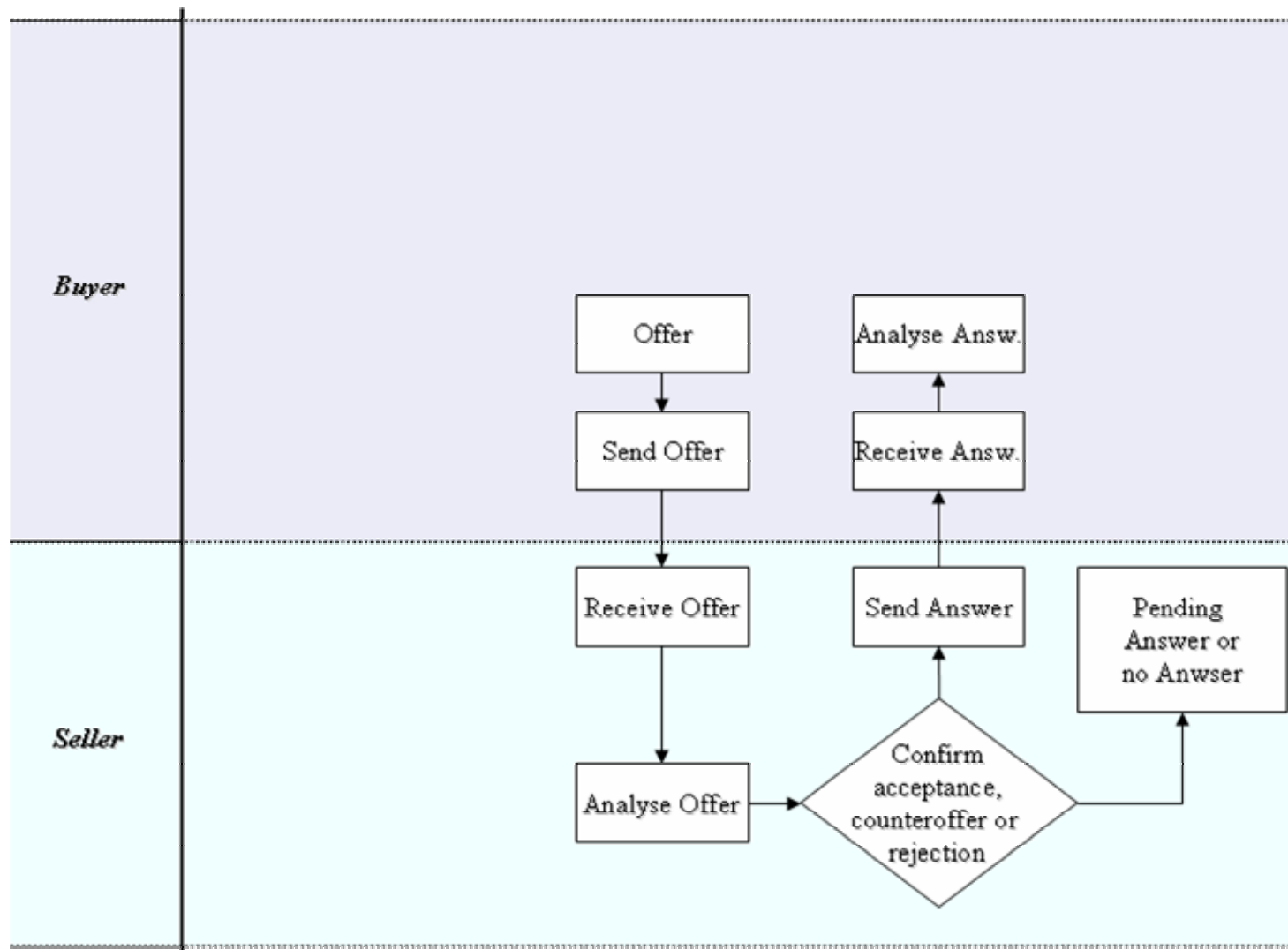




Example: Transacting with **ROSETTANET**

Lingua franca for eBusiness

Contract Law: Offer-Answer Process





Where are the terms and conditions when using standard business processes?



Example: Transacting with **ROSETTANET** Lingua franca for eBusiness

Example: PIP 2A1: Distribute New Product Information

- ✓ **Includes the product information to buyers**
- ✓ **This information is legally binding** for the transacting parties (e.g., seller) due to the change in functional framework, **regardless** of acknowledgements



- ✓ **Problem:** How to identify the provided information, and attach this information to the final business transaction ?



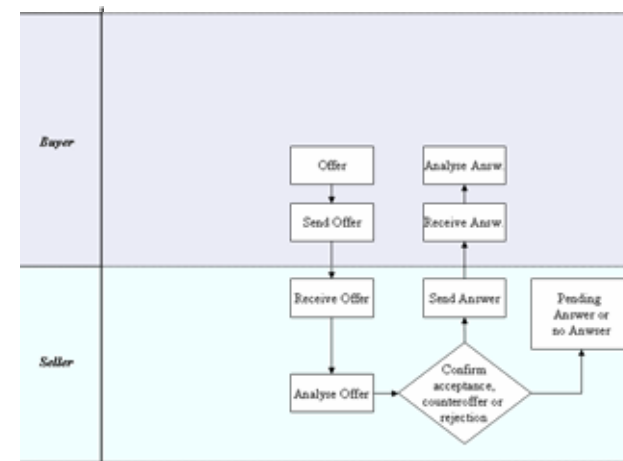
Embedding legal contract

Legal engineering:

- ✓ **Identify borders** between law, technology and business methods
- ✓ **Identify legal connections** inter- and intra-organizationally
- ✓ Ensure that product and service **prices include legal risks**



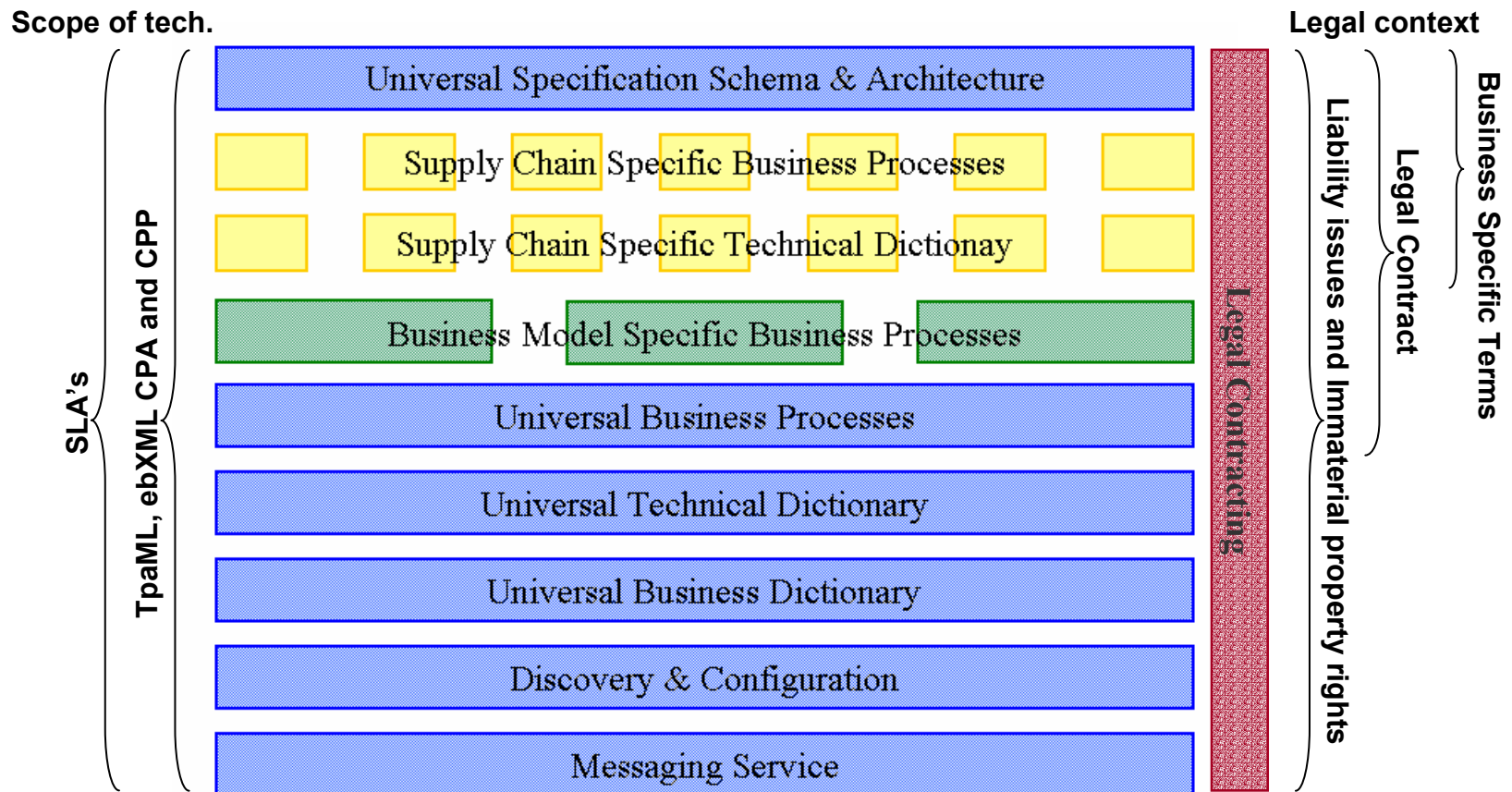
- ✓ **Train business and technical personnel** to identify problem areas
- ✓ **If necessary include legal personnel** on solution design and implementation





Embedding legal contract

Embedding Legal Contract for Demand Supply Network:





Embedding legal contract

Legal contract and Commercial setting:

✓ E-Business Transacting **with standards**



✓ **UDDI, ebXML, RosettaNet, SOAP...**

~~✓ "Legal" Trading Partner Agreements (TPA) to identify the transacting methods~~



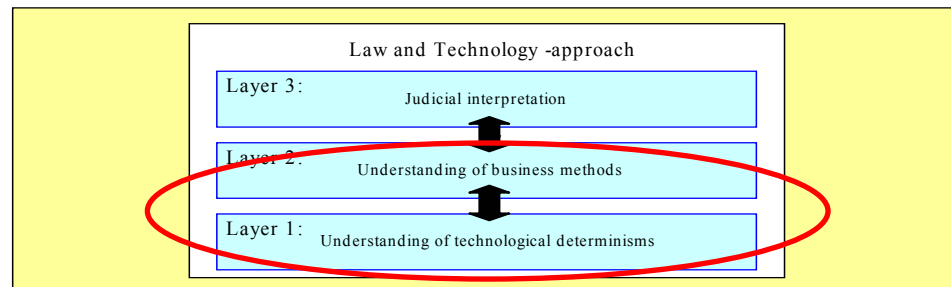
✓ **TpaML => ebXML CPA** to identify and automate the transacting methods

✓ **Offer-Answer Process** to handle the legal contracting process, i.e. transacting process



✓ Identifying and understanding of the Offer-Answer Processes **within transacting processes**

Technical layer:

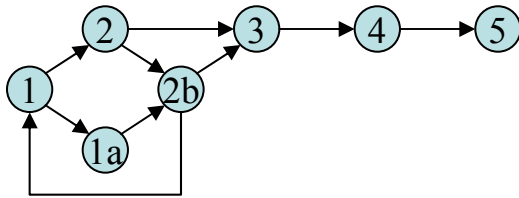




Embedding legal contract

Legal contract and Purpose:

✓ **Process view** also for legal contract to **support the business transacting**



✓ **Legal contract terms and conditions** are found from the different parts of product and service descriptions (**from** caveat emptor **to** caveat venditor)

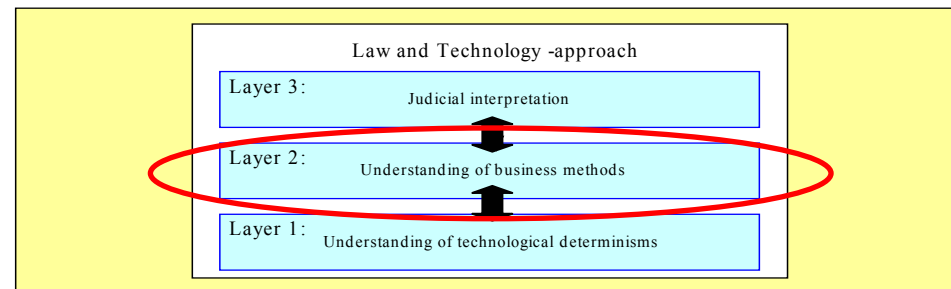


Business transactions:

✓ **Identify and embedd in standard business processes** (e.g., ebXML, RosettaNet) the legal contract and liability issues with view as chain of events (i.e., risk allocation in demand supply network)

✓ **Inter-linkage between business transaction and product/service information**: governance of done and changed contract terms and their conditions

Business layer:





Embedding legal contract

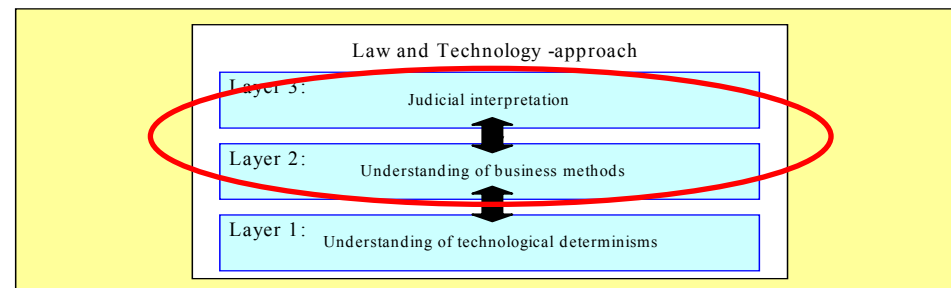
Legal contract and Effect:

- ✓ **Fulfillment successfully** has only positive effects, if no body claims otherwise !
- ✓ **Unexpected – risk – situations** that can't be handled within business process as a commercial settings
- ✓ **Liability situations** (risk allocation) are shared equally within value-network

Challenges for Processes:

- ⇔ ✓ **Consistent data** of done legal contracts and business transactions !
- ⇔ ✓ **Exceptionhandling** should be built to acknowledge situations that have legal relevance, and notify them if not able to handle them automatically
- ⇔ ✓ **Identifying and describing liability positioning** within existing standards (e.g., ebXML, RosettaNet)

Legal layer:





Example: Transacting with

ROSETTANET
Lingua franca for eBusiness

Embedding **Message Guidelines for Contract** in PIP 3A4:
Present 2/2 (release 02.00.00):

64: ContractInformation



✓ **Problem:** No definitions for legal contract, except a possibility to include legal contract as a **document** in message, which is not computer readable !



Example: Transacting with **ROSETTANET**

Lingua franca for eBusiness

Embedding **Message Guidelines for Contract** in PIP 3A4:

Near future 1/3 (release 02.xx.xx):

✓ **Answer:** Legal constraints that represent the risk positioning of a service provider (e.g., product or service) in value-network!



...

64 0..n |-- ContractInformation

New {

xx 0..1 | |-- liabilityWithinWebServices

xx 0..1 | |-- warrantyDisclaimer

65 1 | |-- contractIdentifier.ProprietaryDocumentIdentifier

66 0..1 | |-- primaryContractWith.PartnerDescription

67 1 | | |-- BusinessDescription ...

Patent pending.



Example: Transacting with



Embedding **Message Guidelines for Contract** in PIP 3A4: **Near future 2/3** (release 02.xx.xx):

64: liabilityWithinWebServices

Entity instances:

No liability for...

Joint liability for...

Not to be sold together with...

...

XML Example:

```
<ContractInformation>
```

```
  <liabilityWithinWebServices>
```

```
    <NoLiability>all</NoLiability>
```

```
    <JointLiability>ISBN 1-234-567, ISBN 1-3424-5654...</JointLiability> ...
```

```
  </liabilityWithinWebServices> ...
```

Patent pending.



Example: Transacting with

ROSETTANET
Lingua franca for eBusiness

Embedding Message Guidelines for Contract in PIP 3A4: Near future 3/3 (release 02.xx.xx):

64: warrantyDisclaimer

Entity instances:

Product and/or service warranty disclaimer

XML Example:

<ContractInformation>

<warrantyDisclaimer> CompleteCare: CompleteCare covers all accidental damage except fire damage and also excludes theft, loss and damage due to intentional damage. CompleteCare is currently not available in all states...

</warrantyDisclaimer >...

Patent pending.



Conclusions

Legal

- ✓ **TPA's** are technical question, not legal problems
- ✓ **Embedding** legal contract and liability to Web Services
- ✓ **Legal constraints** should be computer readable



Business

- ✓ **Awareness** of high impact of legal issues in E-Business
- ✓ Legal issues should be **built within** business process standards
- ✓ Product and service **prices acknowledge reasonable legal risks**

Technical

- ✓ **TPA's** out of legal scope (e.g., ebXML CPA)
- ✓ **Exceptionhandling** should be built to acknowledge situations that have legal relevance
- ✓ **If necessary** include legal personnel on design and implementation





Notice for the presentation

The distribution of this publication does not include any transfer of pending patents or patents, copyright or other legally protected rights regarding this publication and its contents. The copyright holder has no objection to the facsimile reproduction by anyone of the publication, but otherwise reserves all copyright rights whatsoever. The following notice applies to data as described and drawings in the publication:

Copyright. 2002, Usva Kuusiholma, All Rights Reserved.