Inter-Organisational Controls as Value Objects in Network Organisations

Vera Kartseva

Jaap Gordijn

Yao-Hua Tan

Vrije Universiteit Amsterdam
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Agenda

- Value object (e^3-value)
- Property rights theory from economics (Coase 1960)
- Value objects as rights
- Guidelines for modelling documents as value objects
  - Transfer Documents
  - Executing Documents

e^3-value: methodology and ontology

- **Value object** definition (Gordijn and Akkermans 2003)
  - Good, service outcome, experience
  - Is of economic value for at least *one* of the actors
- Not all objects are value objects (e.g. documents)
- Sometimes difficult to decide when something is a value object or just a process object
- E.g. modeling *documents*
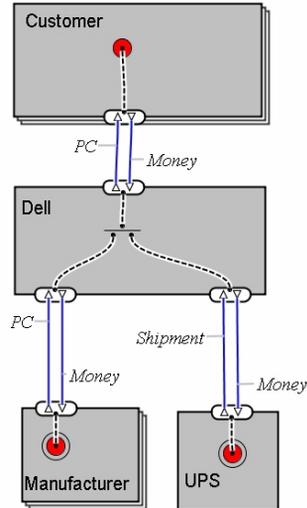
Motivation behind e^3-value

- Many commercial services are offered by a *partnership* of enterprises
- Developing complex IT services requires ISs that span multiple enterprises
- Requirements engineering techniques
- Beforehand, it is important to understand *which* enterprises are involved and what they *exchange of economic value* with each other

Ticket example
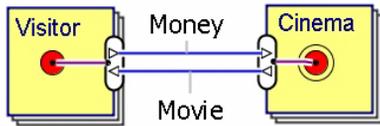
(a) Ticket as a value object
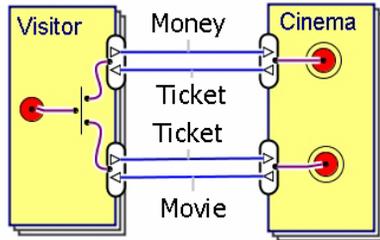
(b) Ticket as a value object

- Ticket is an **evidence document**

- **Should we model the ticket as a value object or is it a part of business process only?**


Possession vs ownership

- What is a value exchange: transfer of possession or of rights?
- You can possess an object, but not have rights of ownership for it
- Possession is not ownership
- Suggestion: an exchange, that only involves a transfer of possession, but not rights is not a value exchange
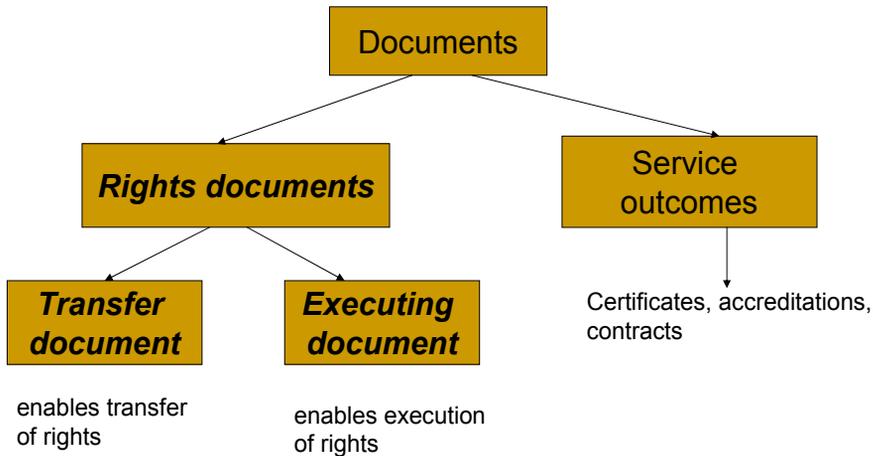
Property rights theory

- Vector of rights (Coase 1960)
  - *use right* - a right to define the potential uses of an **asset**
  - *income right* a right to receive income from an **asset**
  - *rights to transfer* an **asset** permanently to another party
- Divided ownership
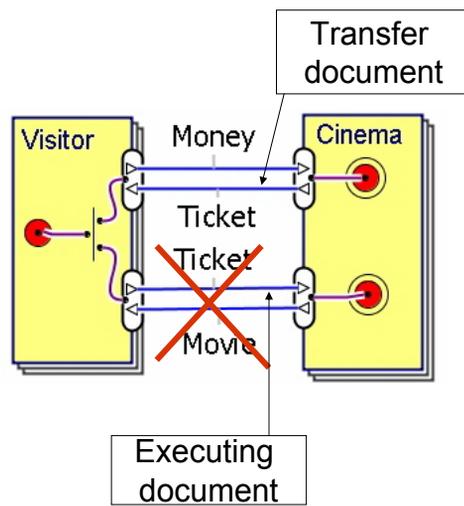 - Two or more actors own rights for the same asset
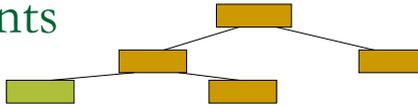
Ontology of value object
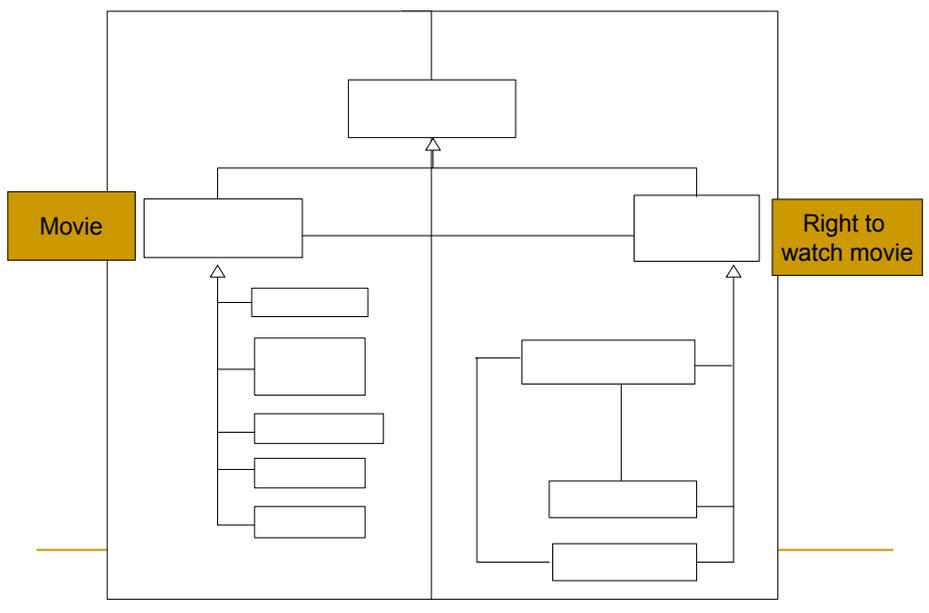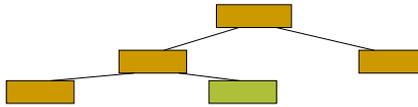
Documents as value objects

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                    ┌─────────────────┐
                    │    Documents    │
                    └─────────────────┘
                   ╱                   ╲
         ┌──────────────────┐      ┌──────────────┐
         │ Rights documents │      │   Service    │
         │                  │      │   outcomes   │
         └──────────────────┘      └──────────────┘
          ╱            ╲                    │
  ┌──────────┐   ┌──────────┐               ▼
  │ Transfer │   │ Executing│      Certificates, accreditations,
  │ document │   │ document │      contracts
  └──────────┘   └──────────┘

  enables transfer    enables execution
  of rights           of rights
```

Rights documents

Transfer document

Executing document

Rights documents

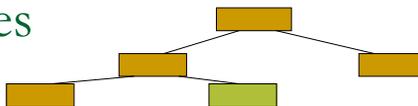- *Guideline 2. Transfer documents are value objects: exist in exchanges where the document enables the transfer of rights*

- *Guideline 3. Executing documents are not value objects: exist in exchanges where the document enables the execution of rights – not a value exchange, because it includes only transfer of possession*
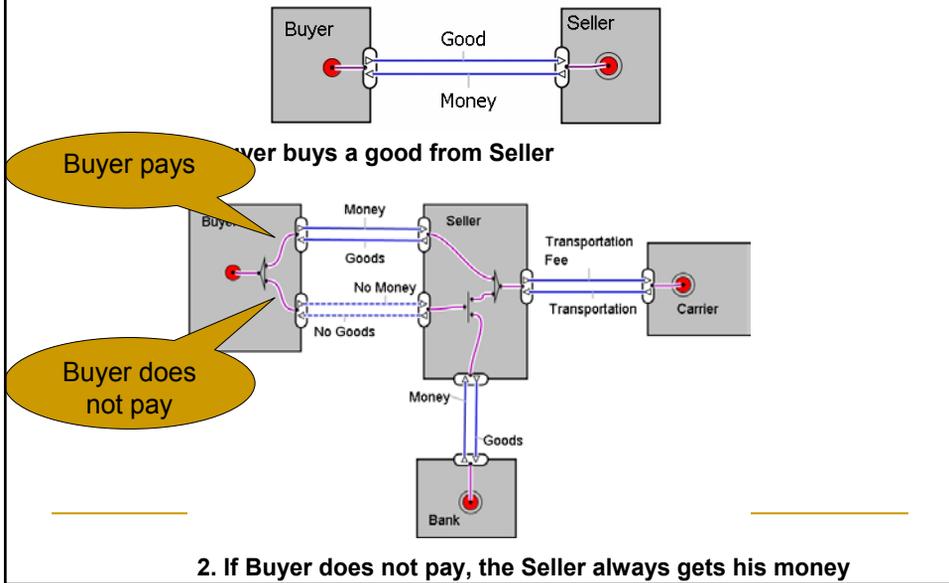
Other exchanges

*Guideline 4. A **executing document** can also be a value object in value exchanges, where it does not fulfill an executing function, as long as it fully complies with Guideline 1 (willingness to exchange).*
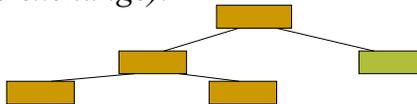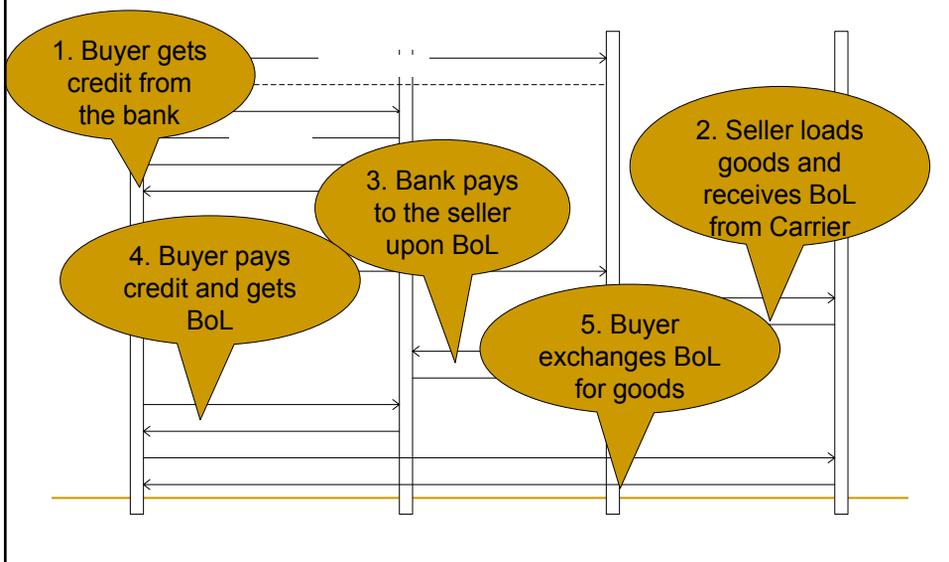
Guideline 5. If a document is not a 'rights evidence documents', it can only be modeled as a value object if this document complies with guideline 1.

Case study 'Bill of Lading'

Buyer pays

Buyer does not pay

...yer buys a good from Seller

2. If Buyer does not pay, the Seller always gets his money

Case study 'Bill of Lading'

1. Buyer gets credit from the bank

2. Seller loads goods and receives BoL from Carrier

3. Bank pays to the seller upon BoL

4. Buyer pays credit and gets BoL

5. Buyer exchanges BoL for goods

Case study 'Bill of Lading'

Buyer

Goods:{Income ,Use, Transfer}

Seller

Fee for LC

Money

Letter of Credit (G.5)

Bank

Willingness to pay

BoL(G.2)   Transportation

Transportation Fee

Transfer

BoL(G.4)

BoL(G.2)

Transfer

Money

Carrier

←**BoL**
Goods→

Case study 'Bill of Lading'

Buyer

Goods:{Income ,Use, Transfer Right}

Seller

Fee for LC

Money

Letter of Credit(G.5)

BoL(G.2)   Transportation

BoL(G.4)

Bank

Transportation Fee

P

Money

BoL(G.2)

Goods:{Income ,
Use & Transfer Right}

Buyer does
not pay

Carrier

←**BoL**
Goods→

Conclusions

- Willingness to exchange for a value object
- Economic perspective vs rights perspective
- Transfer of rights vs execution of rights
- Transfer of rights is a value exchange
- Execution of rights is not a value exchange, since it only transfers possession, not the rights