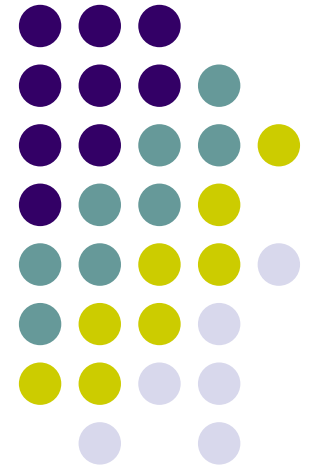


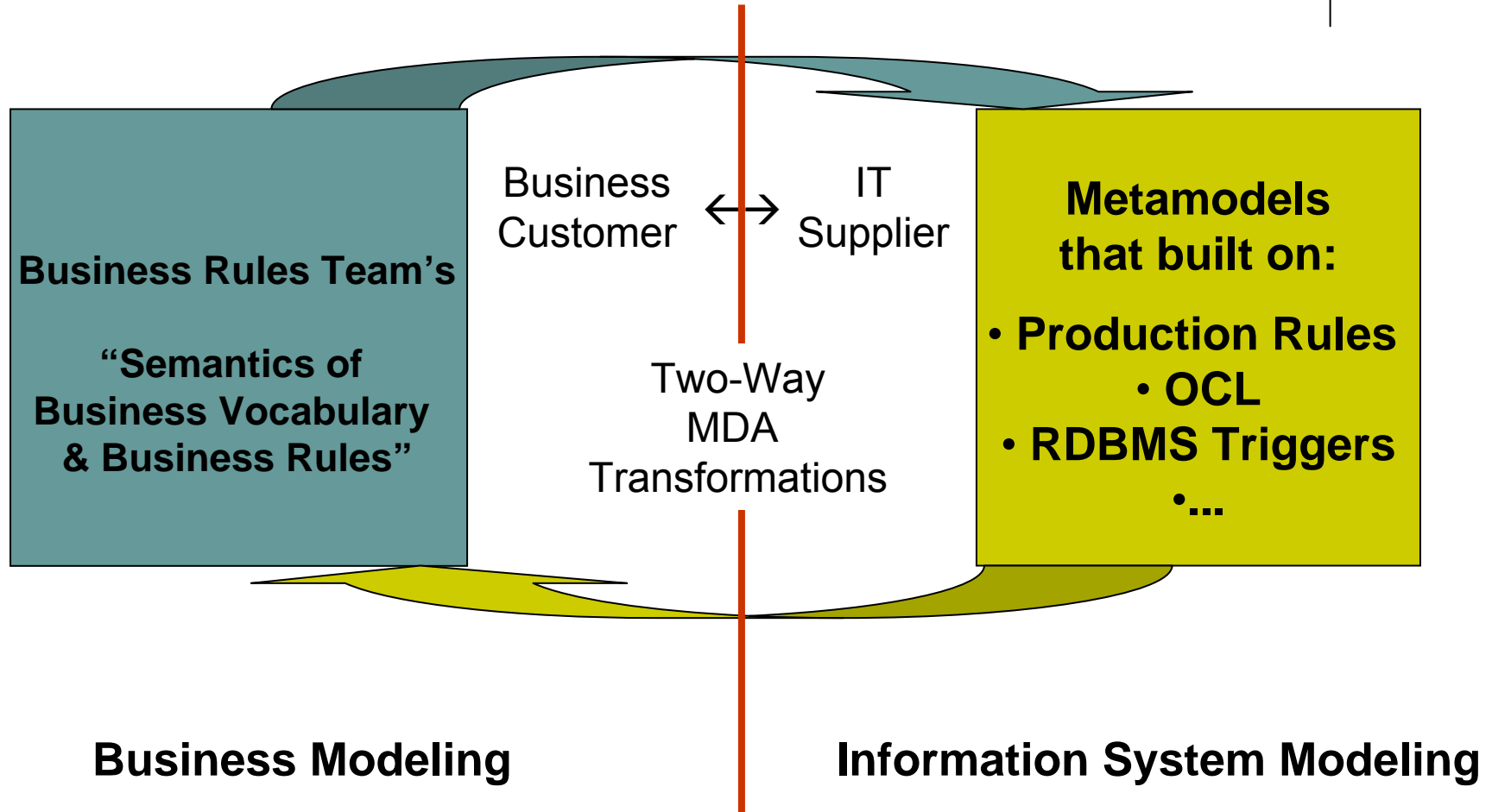
“Semantics of Business Vocabulary & Business Rules”

W3C Workshop on
Rule Languages for Interoperability
Washington, DC
April 26-28, 2005

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for the Business Rules Team
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Rules Standards for Business & Information System Modeling



An SBVR “Business Vocabulary+Rules” is Owned by the Business (*and NOT IT*):



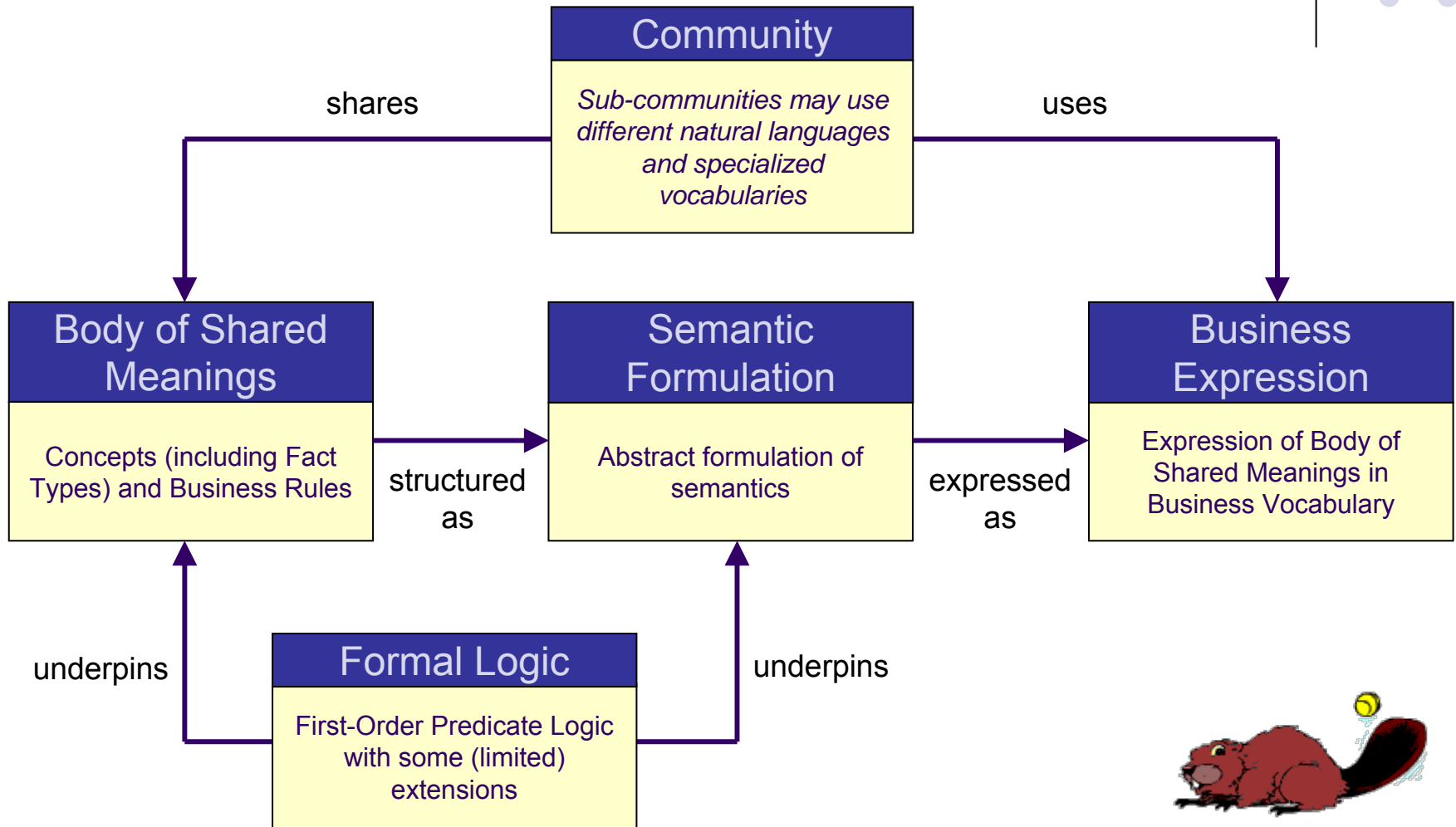
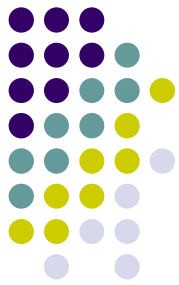
- ABOUT the Business
 - **NOT** the *Information System* or *Recordkeeping System* – manual or automated
- FOR Business purposes – the capability to run the business
 - **NOT** directly for *Information System* building purposes
- FROM a Business perspective – the perspective of Business stakeholders
 - **NOT** from an *IT / Information System* perspective
- IN the actual language used by Business staff – to talk to each other
 - **NO** reference to any *Information System* construct – independent of any implicit or explicit information system consideration or design decision
- BY the Business – created & maintained by Business staff
 - Contents **NOT** the responsibility of *Information Systems* staff – not owned by IT

SBVR: A Synthesis of Four Established Disciplines



1. VOCABULARY STANDARD:
 - ISO 1087-1 “Terminology work - Vocabulary – Part 1: Theory and Application”
2. BUSINESS PRACTICE:
 - BRG’s “Structuring Business Vocabularies for Business Rules”
3. FORMAL LOGICS:
 - Halpin’s “Object Role Modeling (ORM) for the Business”
4. LINGUISTICS & COMMUNICATION:
 - Unisys’ “Linguistic Expression of Business Rules Based on Exchangeable Vocabularies”

Overview of SBVR



Key SBVR New Contribution -- Semantic Formulation



- What it's not
 - Not a language for stating business rules
 - Not a language for stating constraints
 - Not about software design
- What it is
 - Language for talking about meanings of concepts and rules
 - regardless of the languages or notations used to state them
 - A way of **structuring** the **meaning** of:
 - Definitions
 - Rules that govern the operation of an organization
 - Questions (Queries)
 - **Optimized for people and natural language** – not for machine processing
 - Interpretable in formal logics: 1st order and restricted higher order
 - Recursive
- Scope: Whatever business people mean by the vocabularies they use and the rules they make

Semantic Formulation of a Simple Rule



Each rental car always has exactly one vehicle identification number.

Necessity Claim ————— means ► Rule

A position paper for this workshop, "Semantic Formulations in SBVR," is available on the workshop website

Universal Quantification

Exactly-One Quantification

Variable
(rental car)

Atomic Formulation
(rental car has vehicle identification number)

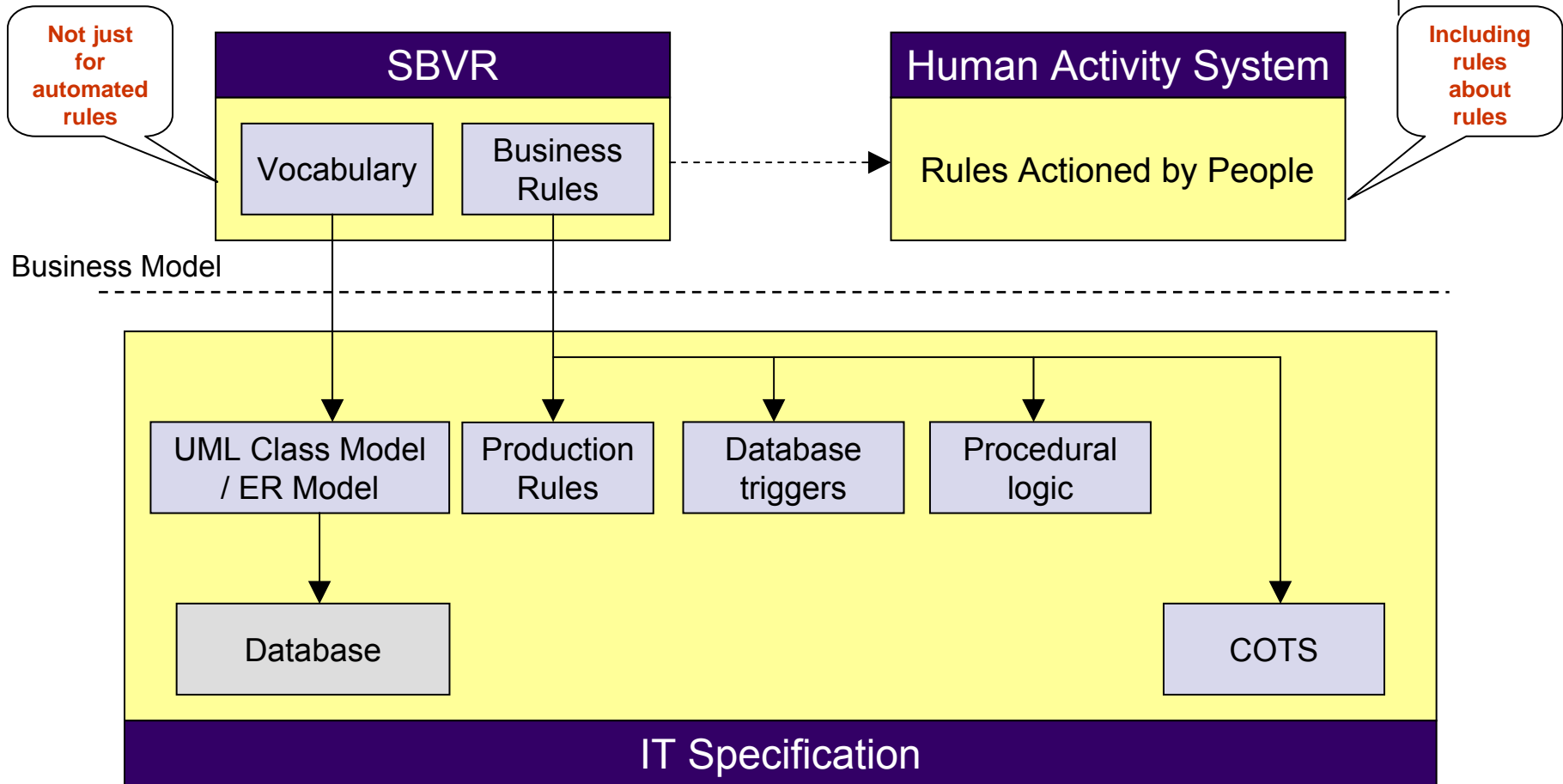
Variable
(vehicle identification number)

XML for Logical Formulation



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Relationship to Rule Exchange and Interoperability



Contribute to / Require from Rule Language for Interoperability



- Rules build on Vocabulary (Facts which Build on Concepts)
- No Rule Interoperability --
 - without Vocabulary Interoperability
 - Consistent vocabulary also applies to business process, organization roles and work flow, business geography and logistics ...
- Meaning separate from Expression –
 - specialized vocabularies, multilingual
 - must support synonym & homonym terms
- Semantic Formulations – bridge people & computer
 - Structure the meaning of
 - Definitions -- CONTENT / DATA
 - Operational Rules -- SERVICES
 - Questions / Queries
- Use approach of Semantic Formulations with RDF and OWL
 - Optimized for machine processing

Vocabulary+Rules Framework for the Semantic Web



Definitions

Rules Governing Actions

Business Model
(Optimized for People)

SBVR --
Business Vocabulary
(about Business Things)

Rules defined
in terms of:

SBVR --
Business Rules
(Semantic Formulation
structures optimized
for people)

Business Transform First

Transform Second

IT System

Computation
Independent
Model (CIM)
(Optimized for Machines)

RDF / OWL --
(about Business Things)

Semantic Formulations
(Structures optimized for
machine processing)

Platform
Independent
Model (PIM)

RDF / OWL --
(about Content / Data)

Semantic Formulations
(Structures optimized for
machine processing)

Class of Platform
Model (PIM)

Web Service XML
Schema,
Relational,
Legacy Wrapper, ...

Rules structured for
Class of Platform
e.g. Production Rules

Platform-Specific
Model (PSM)
(not shown)

Questions?



Supplemental Slides



SBVR



- “Semantics of Business Vocabulary and Business Rules” - Business Rules Team (BRT) response to OMG RFP for BSBR
- Positioned in MDA as part of Business Model
 - Rules for people in real-world businesses
 - Vocabularies for expression of business rules
- Not IT system specification
 - Transformations will be needed
- Might provide vocabulary basis for whole business model (business process, organization ...)



Business Rules Team (BRT)

- Consortium formed especially to respond to BSBR RFP
- 18 Organizations from 7 countries
- Three of the proposers are also proposers for OMG's Business Process Definition Metamodel (BPDM)