University of Applied Sciences Northwestern Switzerland
School of Business

qualified for Business Information Systems MSc BIS

Business Rules Quality

Knut Hinkelmann

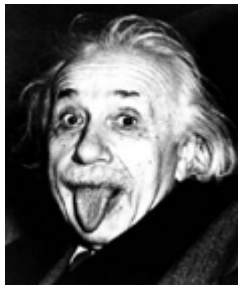
References

This chapter is mainly based on

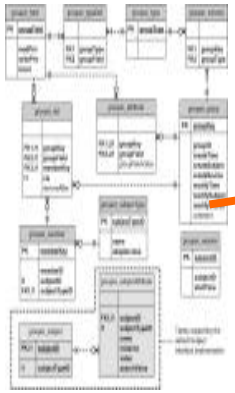
- Morgan, Tony (2002): Business Rules for Information Systems - Aligning IT with Business Goals. Addison-Wesley, Chapter 5: Controlling Rule Quality

Information Sources: Where do the Rules come from?

Documentation



tacit know-how



Business records
(data models)

Automation systems
(program code)

„making rules explicit“

Finding Rules

Approaches for finding rules:

- Static analysis
  - best approach when relevant documentation is available
  - careful checking of source documents for potential ruels
- Interactive sessions
  - bring together analysts and business specialists in *structured interviews* or *analysis workshops*
  - applicable where business knowledge is not readily available in a documented form
- Automated rule discovery
  - find rules through machine analysis (*data mining, code analysis*)
  - provided that suitable source data can be made available

for more details see (Morgan 2002, pp. 110-121)

Clarity of Business Rules

- Business Rule statements must be in a form that the business owner can immediately accept them as valid or reject as invalid.
- Thus, Business Rules are a series of simple statements about the business with the following characteristics:

  Atomic: can't be broken down any further without losing information

  Unambiguous: have only one, obvious, interpretation

  Compact: typically, a single sort of sentence

  Consistent: together, they provide a unified and coherent description

  Compatible: use the same terms as the rest of the business model

(Morgan 2002, p. 61)

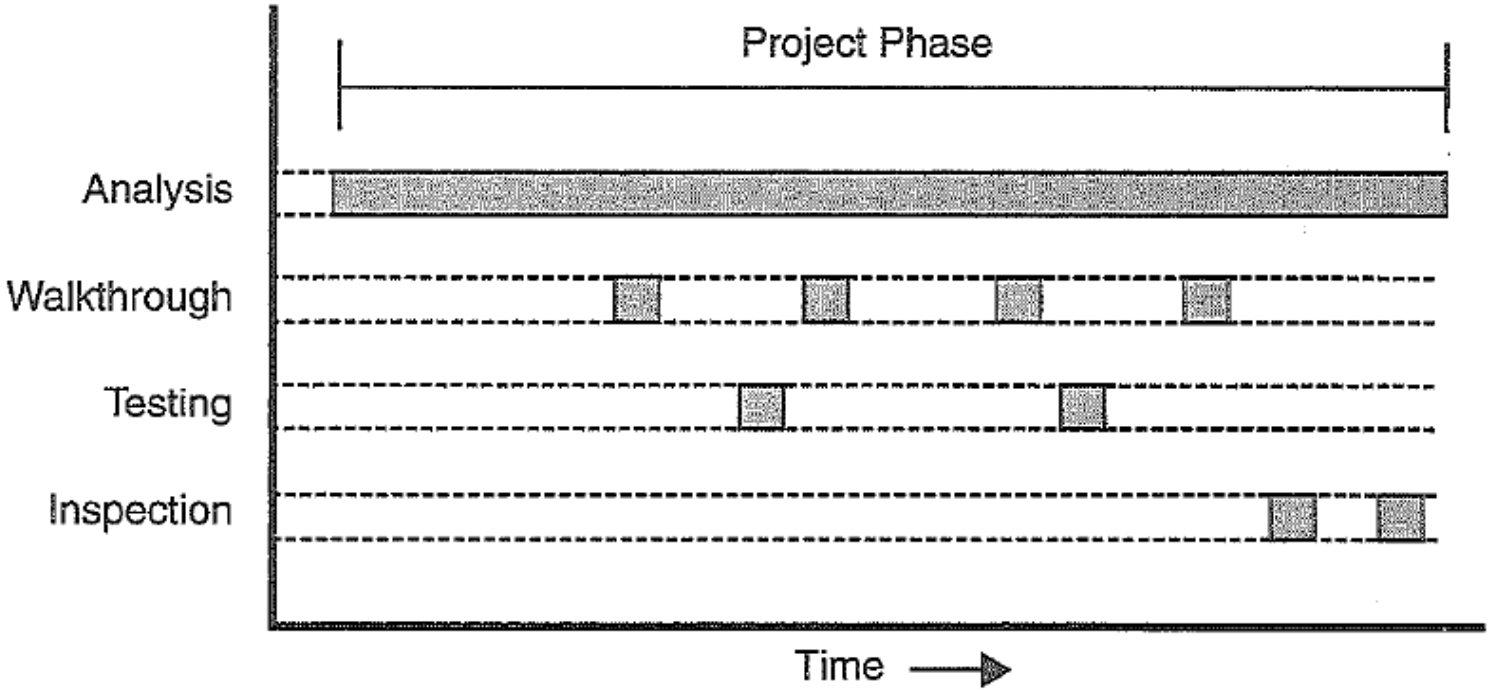
Tips on Rule Construction

- Some common problems in rule construction can be avoided following some general recommendations.
- Examples:
  - Use a fact model so that rules can be related to other parts of the business model
  - Split complex rules into several simple rules if possible
  - Whenever possible avoid using plurals as terms of rules
  - Avoid ambiguous states
  - …
- More tips with detailed descriptions can be found in (Morgan 2002, pp. 79-90).

Controlling Rule Quality

- Quality control mechanisms that can be applied during rule development
- **Walkthroughs**: Workshop-style review sessions
  - as soon as enough rules are defined to support a business scenario
- **Inspections**: more formal type of review
  - involving representatives from many business areas
  - used mostly at major milestones
- **Testing**: ensure a clear understanding of complex rule sets
  - understand the logic of whole sets of rules
  - applying a series of specific test cases to a trial implementation of the rule set

Typical Assessment Activity Pattern



(Morgan 2002, p. 133)

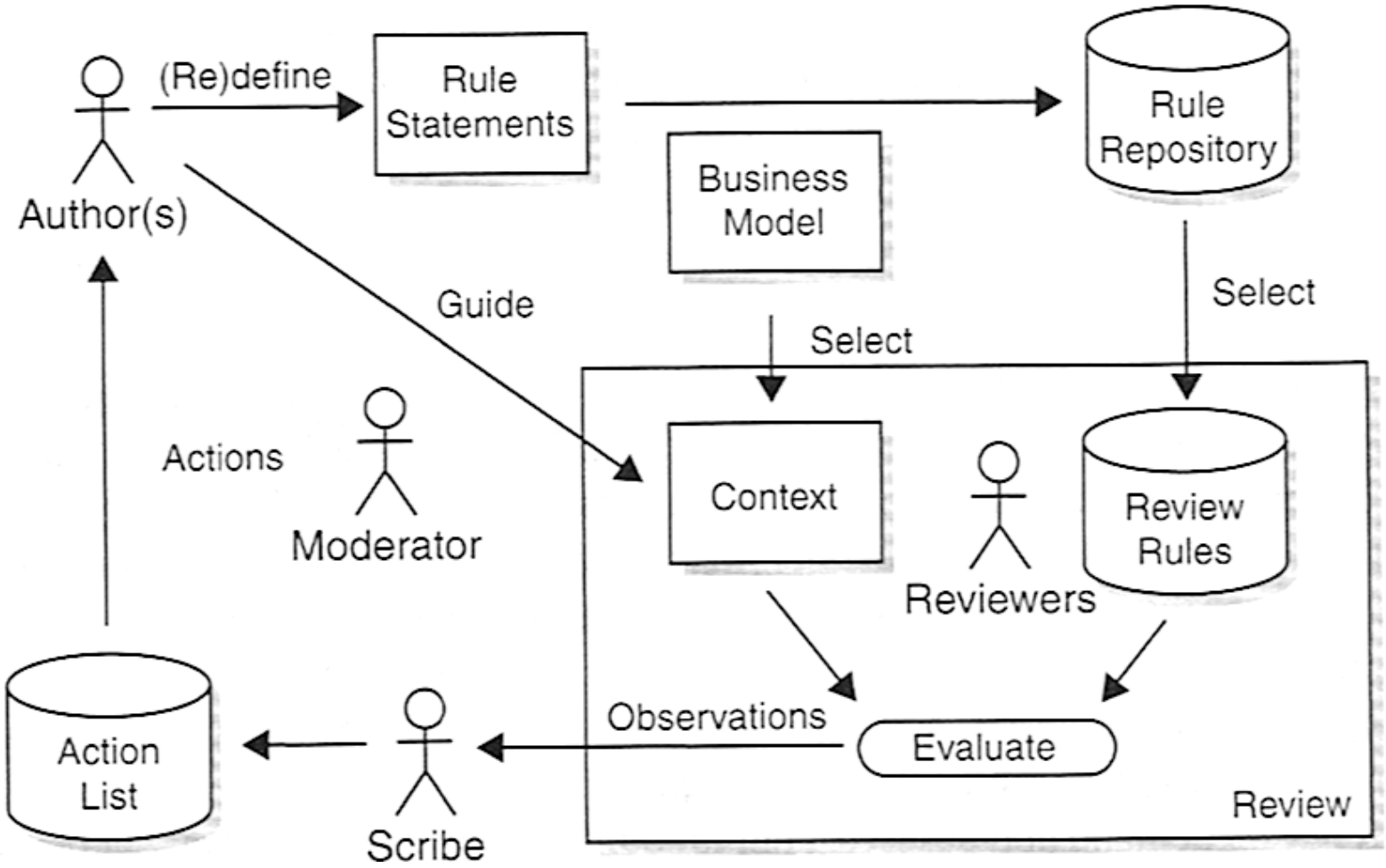
Reviewing Rules: What to look for

- Look for problems of rules, e.g. rules that are
  - malformed: rules that don't conform to standards or preferred rule patterns
  - incomplete: a situation is not properly covered by the rules
  - inconsistent: leading to ambiguous results with different rules
  - redundant: serve no business purpose of are covered by another rule
  - use terms not properly rooted in the supporting fact model

Rule Context

- An individual rule might be relevant in several contexts
- The context defines not only which rules are in scope but also the viewpoint from which you should be reviewing them.
- The context(s) must be agreed before the review is planned
- When a rule is marked as reviewed in the repository, also the context(s) within which the review took place is recorded
- It's also very convenient to apply a version number to each group of rules

General Structure of a Review



(Morgan 2002, p. 135)

Quality Controls

Feature	Reviews		Testing
	Walkthroughs	Inspections	
What's examined?	Rule population, possibly incomplete	Complete rule population	Rule set
When used?	As often as practical, starting as soon as a reasonable body of rules is assembled	Toward the end of a project phase, before a rule population is released	When a sufficiently complex rule set is defined or changed
What's checked?	Rule clarity and business relevance	Rule clarity and business relevance, along with consistency of rule population	Logic of rule set
Focus defined by	Selected business scenarios	Business scope of rule population	Facts constrained by rule set
Purpose of meeting	Work though rules and raise actions	Work through pre-prepared comments and consolidate into actions	Work through test results and raise actions
Results on file	Observations and actions from each walkthrough, checked as completed	Observations and actions from each inspection, checked as completed	Test harness; test data; test results; any resulting actions, checked as completed

(Morgan 2002, p. 167)