Karlstad University
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Adapted for a textbook by Blaha M. and Rumbaugh J.

Object Oriented Modeling and Design

Pearson Prentice Hall, 2005

Managing Modeling

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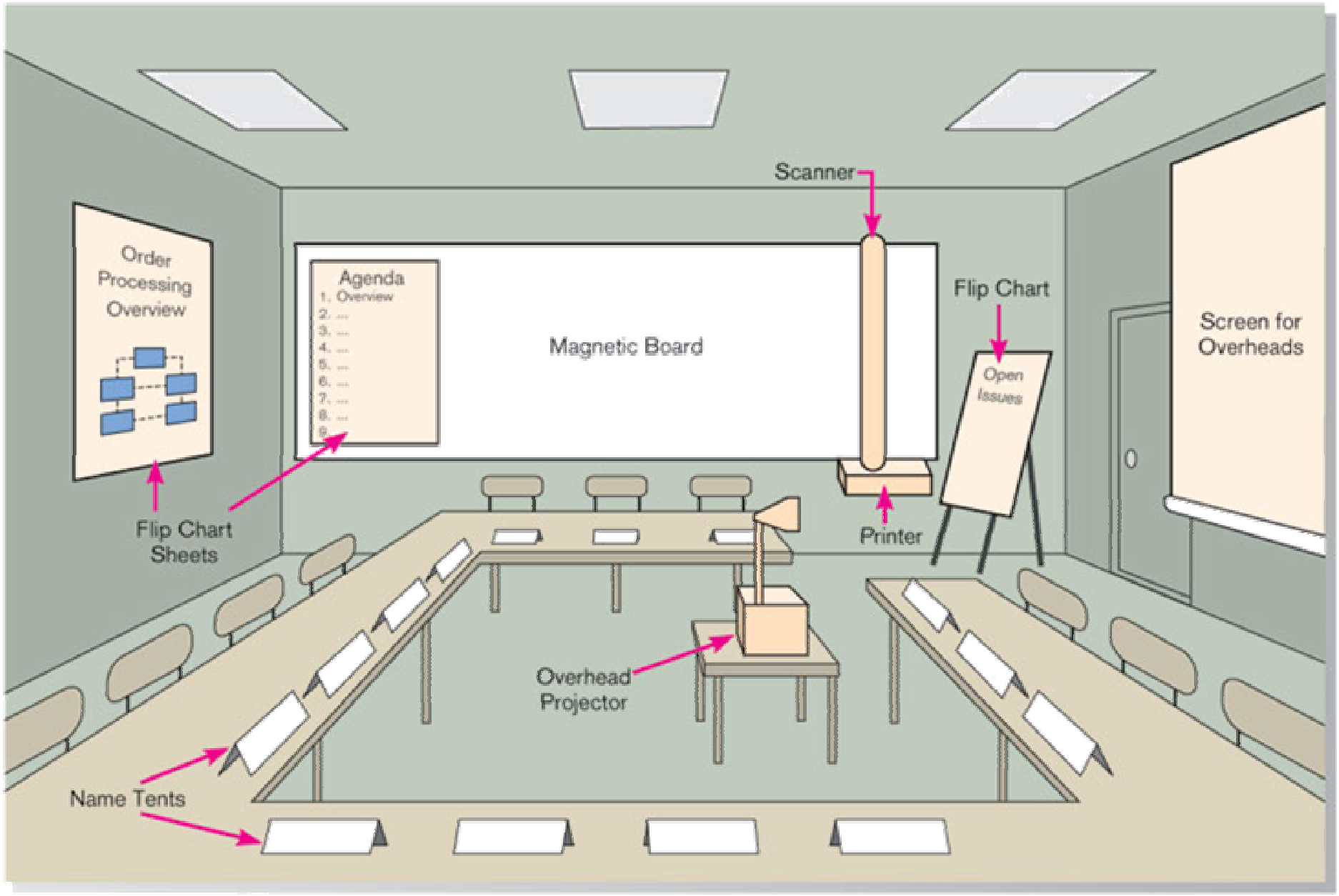
Types of Models

- ✓ Modeling is essential for developing quality software, but it can be difficult to put into practice. Modeling requires a change in organizational culture.
- ✓ Types of models:
  - Domain and Application Models,
  - Meta-models,
  - Enterprise models (are seldom deep, they are useful for reconciling concepts across organizational and technical system boundaries),
  - Models of software products (only some vendors provide them).

Modeling Pitfalls

- ✓ Analysis paralysis (models are never finished),
- ✓ Redundant models (no communication between the respective teams),
- ✓ Lack of training in modeling, failure to think in terms of abstractions (models indirectly realize the application),
- ✓ Lack of focus (business experts need to understand what modelers are doing),
- ✓ Undocumented solutions
- ✓ Lack of technical reviews (Developer do not discuss project solutions, because discussion is not counted as a deliverable).



Source: Adapted from Wood and Silver, 1995.

Modeling Session Participants

- Session Leader: facilitates group process
- Users: active, speaking participants
- Managers: active, speaking participants
- Sponsor: high-level champion, limited participation
- Systems Analysts: should mostly listen
- Scribe: record session activities
- IS Staff: should mostly listen

Requirements Determination Sources

- ✓ From interviews and observations
  - Interview transcripts, observation notes, meeting minutes
- ✓ From existing written documents
  - Mission and strategy statements, business forms, procedure manuals, job descriptions, training manuals, system documentation, flowcharts
- ✓ From computerized sources
  - Modeling session results, CASE tool repositories, system prototype displays and reports

Approaches to Modeling Sessions

	Back-room modeling	Round-robin modeling	Live modeling
Explanation	Record user com ments and build model offline	Show model to user groups, but still build it offline	Build model during a meeting with all the users
Required skill level	Low	Medium	Very high
Productivity (for a model with 50 classes)	Low (about 15 meetings, each 2 hours long)	Medium (about 12 meetings each 2 hours long)	Very high (about 3 meetings, each 2 hours long)
Net recommendation	Best for a novice modeler	Best for a modeler with some applica tion experience	Best for a very expe rienced modeler

Back-Room Modeling

- ✓ Preferred by many analyst, because they can focus what user is saying and struggle with modeling issues alone.
- ✓ Users do not see a model.
- ✓ Multi-user (better option) or one to one meetings.
- ✓ Cumbersome approach for skilled modelers.
- ✓ Analyst must carefully transcribe information, otherwise it may be forgotten.
- ✓ Slow (multiple interviews are required).

Round-Robin Modeling

- ✓ More complex, but more efficient.
- ✓ Participants see a model.
- ✓ Analysts meet small groups (segmented by interest or functional area).
- ✓ Initial modeling is done on a basis of existing documentation.
- ✓ Models are explained to participants (Note: some users do not understand the models).

Live Modeling

- ✓ Meeting of 10-20 people with different interests.
- ✓ Suitable for modeling experts (analyst should be ready for quick new ideas) .
- ✓ Models are built during the meetings.
- ✓ Modeling tools are used for drawing and projecting a model.
- ✓ Between sessions modeler resolves open issues and cleans up diagrams.
- ✓ Active facilitators (few developers have such skills).

Characteristics of Modeling Session Facilitators

- ✓ Impertinence (question everything)
- ✓ Impartiality (consider requirements of all parties)
- ✓ Relaxing constraints (assume anything is possible)
- ✓ Attention to details
- ✓ Reframing (new ways of working)