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Agile Modeling: An Agile Methodology for Systems Modeling

Historical Background

- Introduced in 2002 by Scott Ambler in his book *Agile Modeling*
- Ambler was concerned by developers' overreliance on prescriptive processes (e.g., Waterfall)

What is "Agile Modeling," anyway?

- Ambler defines Agile Modeling as a "practice-based methodology for effective modeling and documentation of software-based systems"
- For Ambler, modeling is a critical point in development—it can decide success or failure
- Agile Modeling's main goals:
    - Improve the efficacy and efficiency of the modeling process
    - Maintain a limited amount of documentation

Agile Modeling is a Supplement

- Agile Modeling is not a "full" agile method (*only* focuses on modeling and documentation)
- Agile Modeling has to be used with a base process, such as Extreme Programming

Agile Modeling's Five Values

- Borrowed from Extreme Programming
    - Communication
    - Simplicity
    - Feedback
    - Courage
- Unique to Agile Modeling
    - Humility

Agile Modeling's Core Principles

- Borrowed from Extreme Programming
    - Assume simplicity
    - Incremental change
    - Embracing change
    - Quality work
    - Travel light
- Unique to Agile Modeling
    - Software is primary
    - Enabling the future is secondary
    - Model with a purpose
    - Multiple models in parallel
    - Maximize stakeholder investment

Agile Modeling's Core Practices

- Iterative and Incremental Modeling
    - Use the right artifacts
    - Create multiple models
    - Iterate to other artifacts
    - Model in small increments
- Simplicity
    - Create simple content
    - Depict models simply
    - Use the simplest tools
- Teamwork
    - Model with others
    - Active stakeholder participation
    - Collective ownership of project
    - Public display of models
- Validation
    - Consider testability
    - Prove models with code

Strengths and Weaknesses

- Strengths
    - Small teams and short projects
    - Good with Extreme Programming
    - Increased modeling and documentation efficacy
    - Improved teamwork and communication
    - Active stakeholder participation
- Weaknesses
    - Not a sufficient agile method
    - May not be suitable for all projects and teams
    - May not always work, even with perfect conditions
    - "All-or-nothing" philosophy
    - Serious lack of supporting empirical research