

Modeling in Early-phase Requirements Engineering

Based on original presentation by Irwin Kwan

Why Do We Model?

- Models facilitate communication
- Models help developers understand the domain

Modelling Techniques

- Early-phase Requirements
 - Organizational models
 - Goal-oriented models
- Late-phase Requirements
 - Data modelling
 - Object-oriented analysis
 - Formal analysis

i* Modelling Framework

- Used to model organizations, stakeholders, and stakeholder intentions.
- Two diagrams
 - Strategic Dependency Model
 - Strategic Rationale Model

Strategic *Dependency* Model For Scheduling Meetings

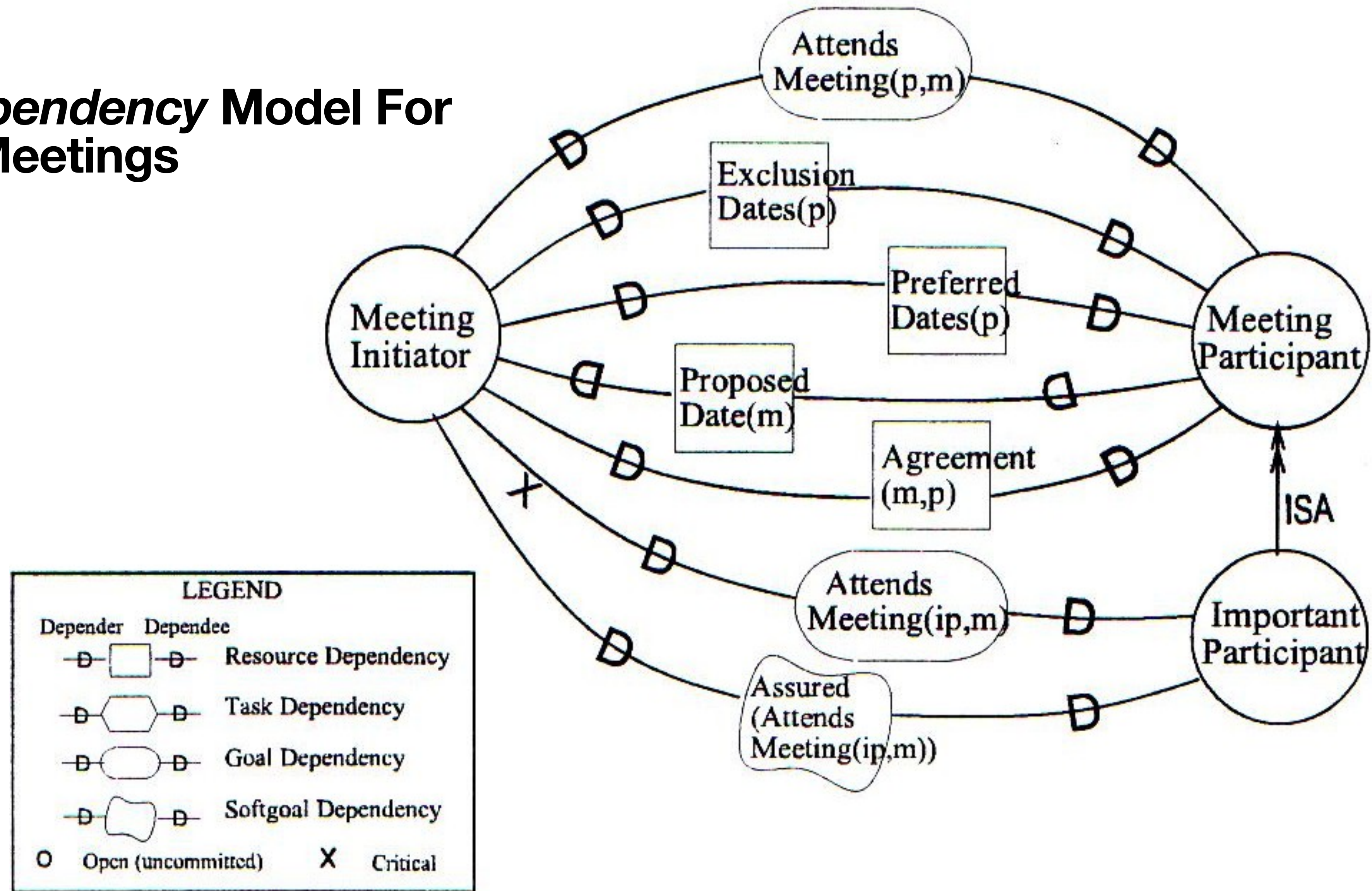


Figure 1: Strategic Dependency model for meeting scheduling, without computer-based scheduler

Strategic *Rationale* Model For Scheduling Meetings

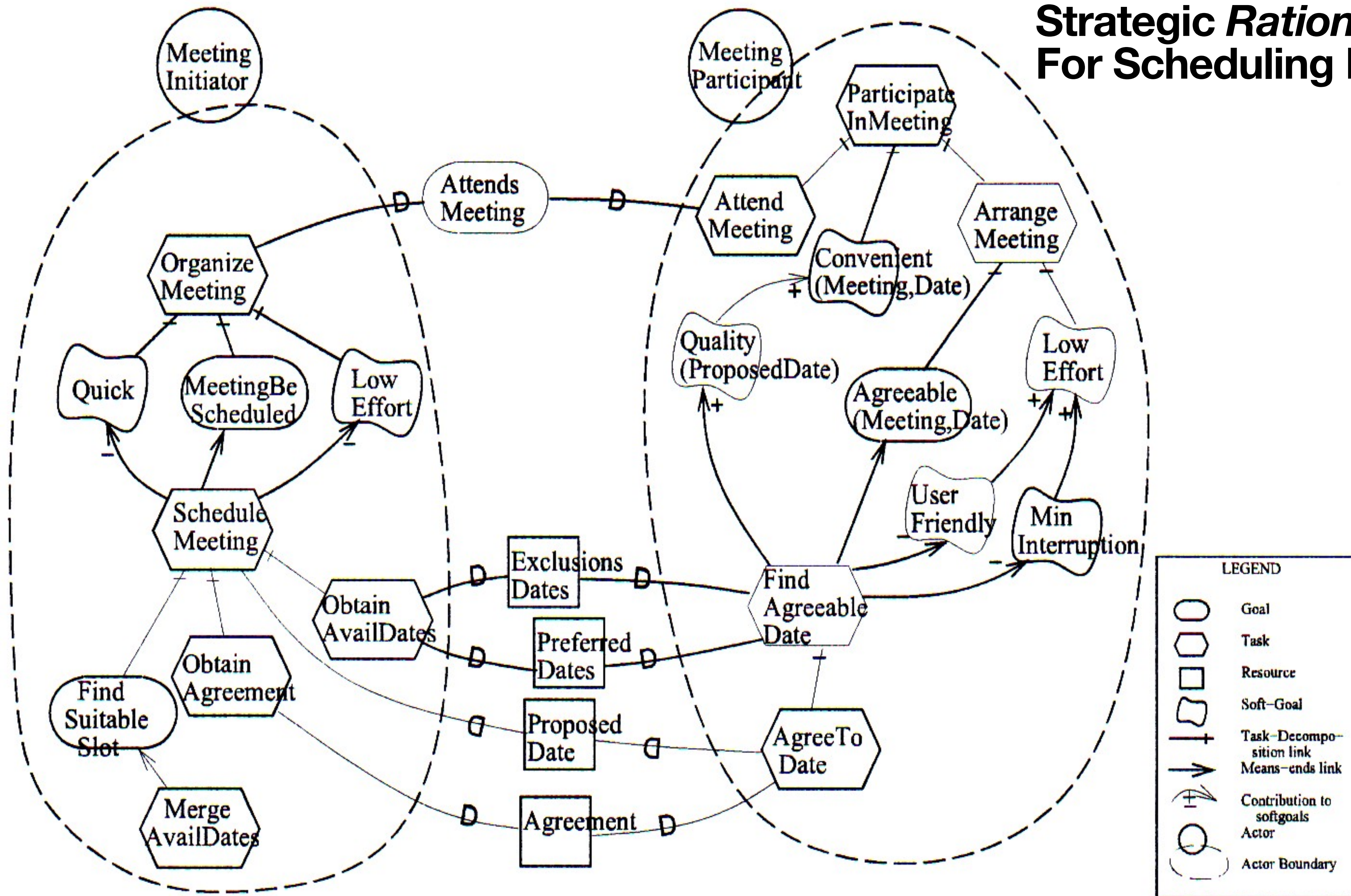
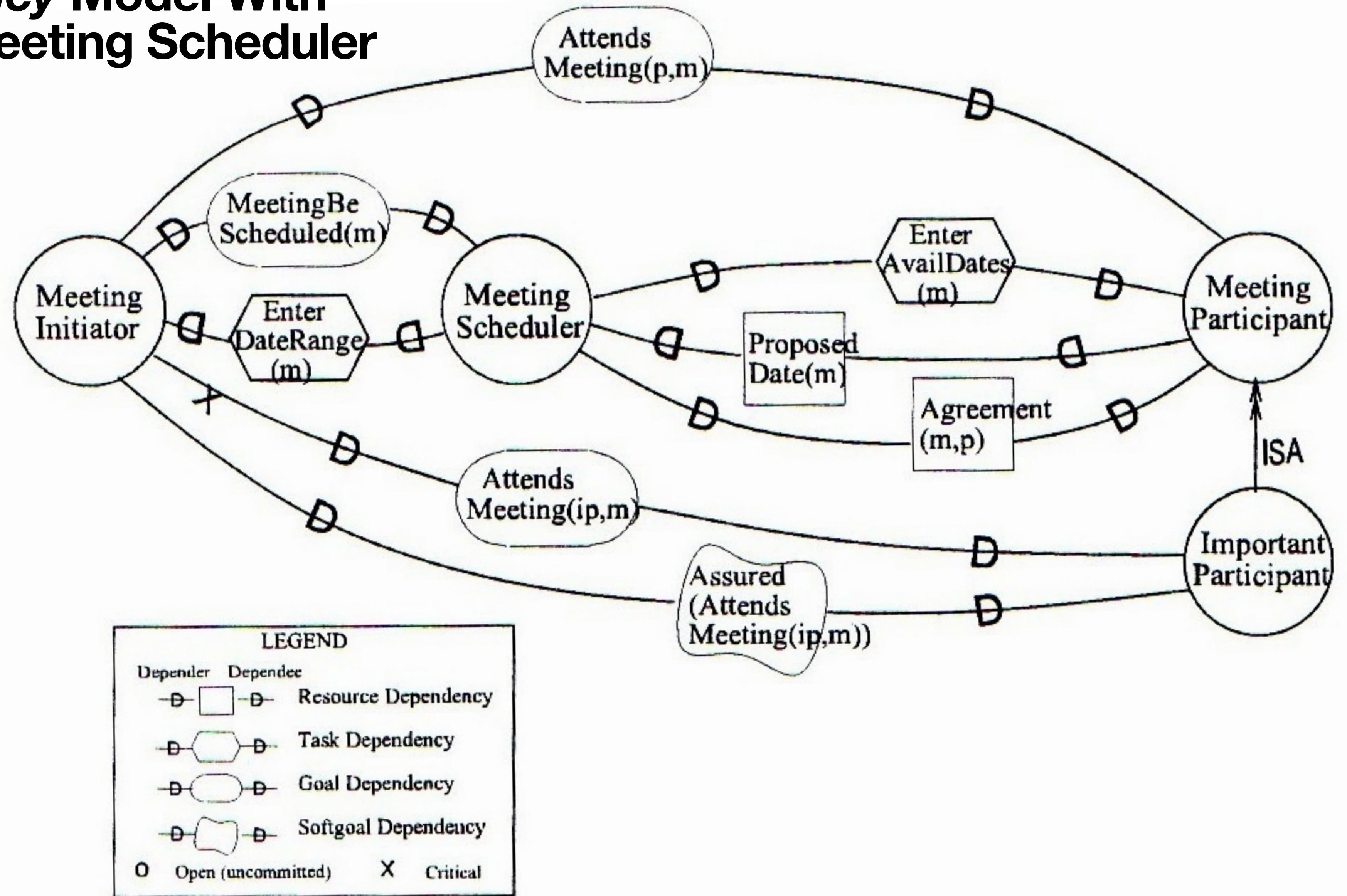
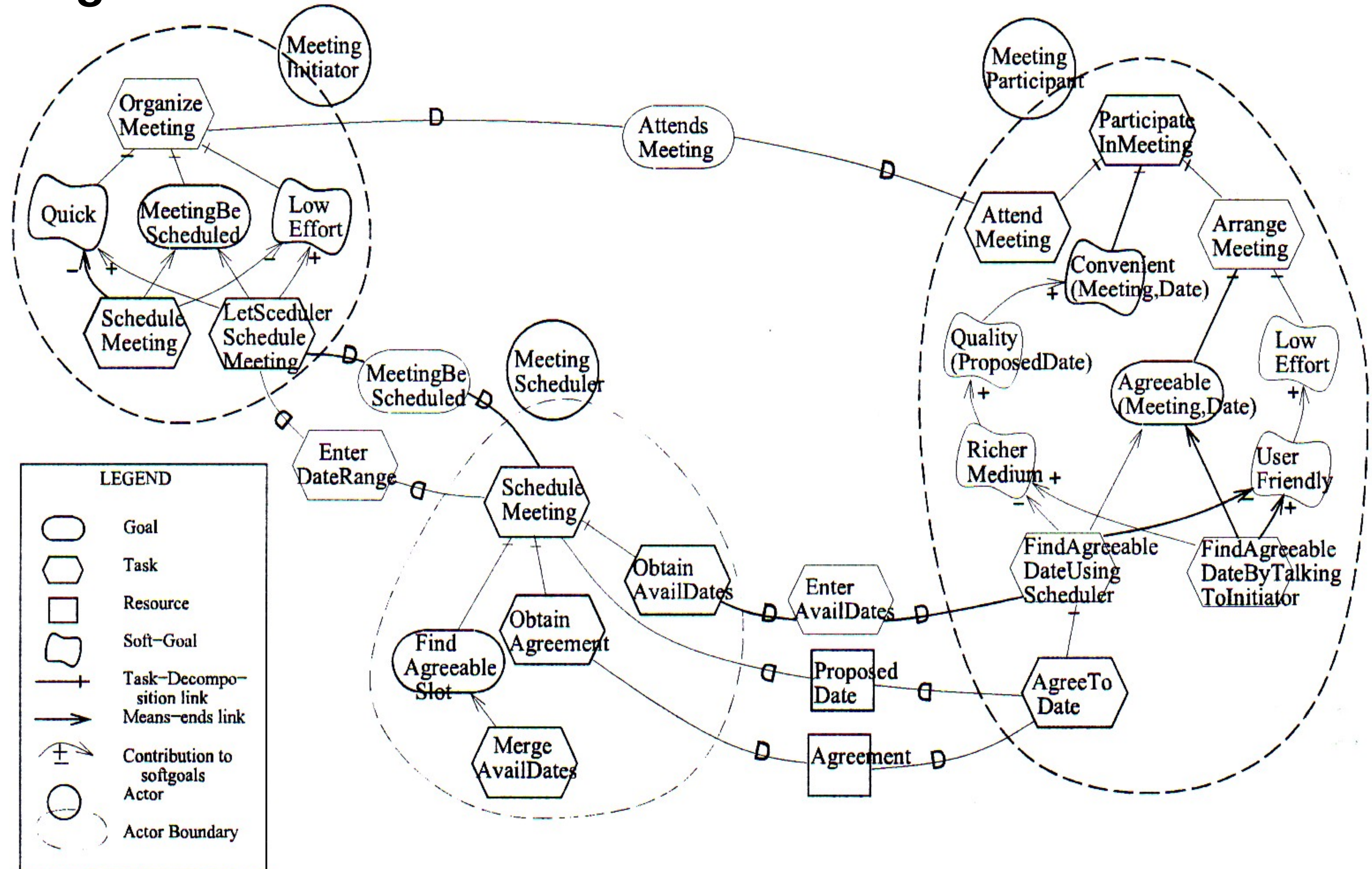


Figure 3: A Strategic Rationale model for meeting scheduling, before considering computer-based meeting scheduler

Strategic *Dependency* Model With Computer-based Meeting Scheduler



Strategic Rationale Model With Computer-based Meeting Scheduler



Exercise

- With your neighbor, sketch/create a SD model for the following:

You are developing a pet monitoring app + service. The app should track health, walks, food, etc., and allow people out of the house some piece of mind about their dog/cat/pot-bellied pig.

Identify the actors in this problem

Identify the dependencies on other actors.

What types of dependencies are they?

Remember: not all Actors need be human.

Viewpoints in Modelling

- A viewpoint-based model is a model of a system from one stakeholder's point of view.
- A viewpoint-based model led to a better understanding of the domain, but is very time consuming. (Easterbrook, et al., 2005)