Supporting Enterprise Stakeholder's Collaboration using Decision Space

-- gain feedbacks and invoke group brainstorming

Goals

- Exposing and supporting multiple stakeholders' collaboration around key decisions outcome in enterprise software engineering processes.
  - Identify preliminary key problem hypotheses that may have significant impact on an important outcome.
  - Define and explore one solution approach, decision space.
  - Identify one concrete example of a real-world instance of the problem.
  - Evaluate the solution with respect to the problem hypotheses
    - ✓ Cost/benefit tradeoffs

Problem Hypotheses

- H1: There are **key decisions** made during the course of enterprise software development projects that significantly affect its outcomes.
- H2: Multiple stakeholders are involved in a single key decision. If the key decisions are made without **collaboration** of the stakeholders they affect, the result is a bad/negative outcome on the project.
- H3: Decisions are **interrelated** and interdependent. Interrelated decisions must be made in a coordinated manner. Understanding these interrelationships and dependencies affects the quality of decisions.
- H4: Explicitly **modeling** and **recording** decisions, their interrelationships and stakeholders involved enable us to infer and manifest coordination and collaboration requirements. These will help stakeholders coordinate and collaborate better as required to produce good decisions/outcomes.

Solution Approach

- Anatomy of a Decision Space

Decision

- Status
- Decision type
- Solution alternatives
- Solution
- Rationale

Stakeholder

- ✓ Development
- ✓ Business
- ✓ Operation

Relationship

<Decision, Decision>

- Dependent on
- Mutual exclusive

<Decision, Stakeholder>

- Creator
- Solver
- Consultant

Solution Approach (cont.)

- Constraints on solution
  - **Locality of benefit**
    - Users receive immediate, desirable benefits for using the solution.
  - **Incremental benefits for incremental work**
    - Small effort is required to obtain benefits.

Concrete Problem

- Financier Certificate of Originality problem
  - Projects in IBM Research need to get COO from IP attorney before transferred to products or getting open sourced.
  - At the time the Financier project needed to integrate org.json as an open source component in the development process, the research team consulted the research IP attorney and got their approval on the open source component.
  - However, when Financier got to the point being transferred to the product team, the product IP attorney rejected COO for Financier, based on their past experience that org.json cannot be used in products as open source component.
  - The research team had to replace org.json, introducing quality risk in the late development process.

Instantiation of Solution for the Concrete Problem