Requirements Engineering Magic

Practical Application of Systems Engineering Alchemy

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Background

- What is requirements engineering?
- Our project effort coincident with ISO standard
- Most engineers avoid developing requirements
How do we develop well written, high quality requirements?

Magic...
How to Make Magic

- Tailor, create RE process working for project
- Model to develop better requirements
- Teaming for requirements engineers
A Tailored Process

[Diagram showing relationships between various concepts such as Concept of Operations from brain dumps, System Requirements, SyRS, and other elements, with arrows indicating flow and transformation processes.]
Requirements Engineering Roles

- ReqsTeamBuilder
- ReqsModeler
- ReqsManager
- ReqsEducator
- RequirementsWriter
The Helpful Requirements Author

- Asks “Why”
- Understands problem domain
- Uses operational concepts
- Furnishes rationale
- Includes verification method & strategy
The Reqs Modeller

- Reviews Existing Models
  - Organizes Systemitizes
- Models Reqs
- Models Interfaces
  - Leads SME Reviews
- Connects Models
  - Architecture
  - Work Bkdn
  - Functions
  - Program Organization
Requirements Team Building

• Gather groups of experts, elicit requirements
  • Build teams dedicated to good requirements
• Small requirements authoring team
  • 2 people
  • More productive than single requirements engineer
  • Mentoring new requirements engineers
• Teaming & uncertainty
System Engineering Alchemy

- Requirements engineering, a TEAM effort
- Tailor existing process, discover RE roles
- Modeling helps develop good requirements
Questions?
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