

# Requirements - Introduction

- ⇒ What are the two main spaces software engineers work in? What are the differences between them?
- ⇒ What are the main elements in requirements engineering? Why are they important?
- ⇒ What are the various drivers in requirements? Do they affect the rest of the software engineering of software systems? Why is the classification dichotomy important?
- ⇒ What are the main problems encountered in requirements? Are they different for different kinds of systems?
- ⇒ Why document? What do we want to document? What good are the documents?

## Requirements - Elicitation

- ⇒ What is Pott's metaphor for elicitation? Why is it useful? What are the three parts of the cycle?
- ⇒ What are the basic components to be gathered or generated in the elicitation process? What does each component include?
- ⇒ What is the best way to start the elicitation process?
- ⇒ What techniques are useful to describe and analyze requirements?
- ⇒ What are critical questions that need to be answered?
- ⇒ How do you know when to stop?

## Requirements - Scenarios

- ⇒ What are the main elements in a scenario? Why are they important? How do they map onto the necessary components in a requirements specification?
- ⇒ What is the formal definition of scenario? Why are the various elements in that definition important?
- ⇒ Come prepared to discuss the example scenario of scheduling a meeting.

# Requirements - Obstacles

⇒ **Meta-comments for this paper:**

↳ The paper is hard. Best to focus on the abstract, introduction, motivating example, the overview of generating examples, validation, discussion, and conclusions.

↳ Explore beyond the paper for things you don't understand well - for example, a domain model (eg, internet search is your friend)

⇒ **Why are obstacles important in requirements? How do obstacles relate to what are the normal expectations of the desired system? To exceptional (or abnormal) conditions encountered by the desired system?**

⇒ **What is a domain model? Why is it important in generating obstacles? What else is important as well?**

⇒ **What are the differences and similarities between obstacles and critical conditions?**

## Requirements - Obstacles

- ⇒ What are the similarities between generating obstacles and Pott's eliciting requirements?
- ⇒ What is the difference between a behavioral goal and a soft goal? Why is that distinction important?
- ⇒ What is the difference between "bounded achieve goals" and "unbounded achieve goals"?
- ⇒ How do goals (requirements) interact with domain models in generating obstacles? What is in the domain model relative to the requirement goal that creates an obstacle?

# Discussion

⇒ Let's consider a scenario for getting cash from an **AMT**

- ↳ Who are the stakeholders?
- ↳ Who are the agents?
- ↳ What are the critical conditions?
- ↳ What are the outcomes?
- ↳ Let's describe in detail a successful scenario
- ↳ Let's describe a scenario in which the phone call fails

⇒ **Generating Obstacles**

- ↳ What are the various domain models needed in the AMT
- ↳ In the elements of the scenarios above, which would be considered to be obstacles that need to be addressed?
- ↳ Which obstacles are critical for the ATM to work properly?
- ↳ What happens if you don't address a critical obstacle?