CSE 403, Software Engineering
Lecture 4

Gathering user requirements

User requirements
- Requirements from the user's point of view
- Expressed in the user's language
- Based on understanding of user's application
- Does not define implementation
- How do we get them???

Requirements gathering
- Understand application from users perspective
  - An application which doesn't match needs won't be purchased, or won't be used
  - Building for a specific customer
  - Building a widely used application, getting requirements from representative users
- Not asking users to define the application
- Observations, Interviews, Examination of artifacts, Focus Groups
- Ethnography
  - Branch of anthropology dealing with the scientific description of individual cultures

Understanding use case
- Yanomamo: the Fierce People
  - Become unobtrusive observer of daily lives of target population
  - Long term, immersive
  - Initial observations often incorrect/incomplete
    - Many reasons for not telling the truth
    - Exceptions and complexities appear over time

Background study for restaurant table management app
- Get a job waiting table
- Excuse for many restaurant meals
"Describe process of seating a patron"

- Maitre d' consults seating chart and directs waiter to take the patron to the specified seat

Observed behavior

- Patron sees a friend and joins another table
- Patron sits at a different table and won't move
- Group is wrong size and tables are combined
- Patron chooses own table

Ethnographic study

- Jonathon Grudin
  - Boeing executives use of video conferencing
  - Result
    - Deployment of video conferencing facilities in offices a failure because it required a different work flow for establishing communication

Field observations

- Protocols developed in many academic fields
- Event based
- Narrative

What do you do with the data?

- Define user experience of application
- Application must support the process
- Efficient handling of common cases
- Ability to handle exceptional cases (which aren't all that exceptional!)
- Develop feature lists

User requirements

- Business Requirements
- User Study
  - Use Cases
  - User Requirements
  - Functional Requirements
Positive Example

- TCAS – Air traffic collision avoidance system
- Target: Pilots

Negative example

- Microsoft Visual Studio Academic
- Target: Intro CS Instructors and their students