



## CSE 403, Software Engineering Lecture 4

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### Gathering user requirements



## User requirements

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- 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

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- 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



## Understanding use case

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- 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



## Anthropology 101

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- 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

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- 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

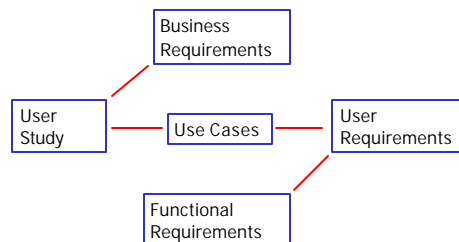
## Field observations

- 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





## Positive Example

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



## Negative example

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