

GATHERING REQUIREMENTS  
&  
TASK-CENTERED DESIGN

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# AGENDA

## ❖ Discussion

- What we have learned

## ❖ Let's design an app!

Situation → Prototype → Users & Tasks

→ Task-Centered Requirements → Interface & Task Walkthrough

# DISCUSSION

## WHAT WE HAVE LEARNED

- ❖ Methods in your mind to **gather requirements** in a design?  
Strength? Weakness?
- ❖ Given key ideas of **rapid ethnography**, when you would use it?
  - Narrow the focus of field research
  - Interactive observations
  - Collaborative and computerized iterative data analysis
- ❖ **What** do you think is **task-centered design**? **When** would you like to use it?

Hints!

# TIME TO DESIGN AN APP!

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Have you ever had difficulty in **finding the right room** at SFU Burnaby Campus?

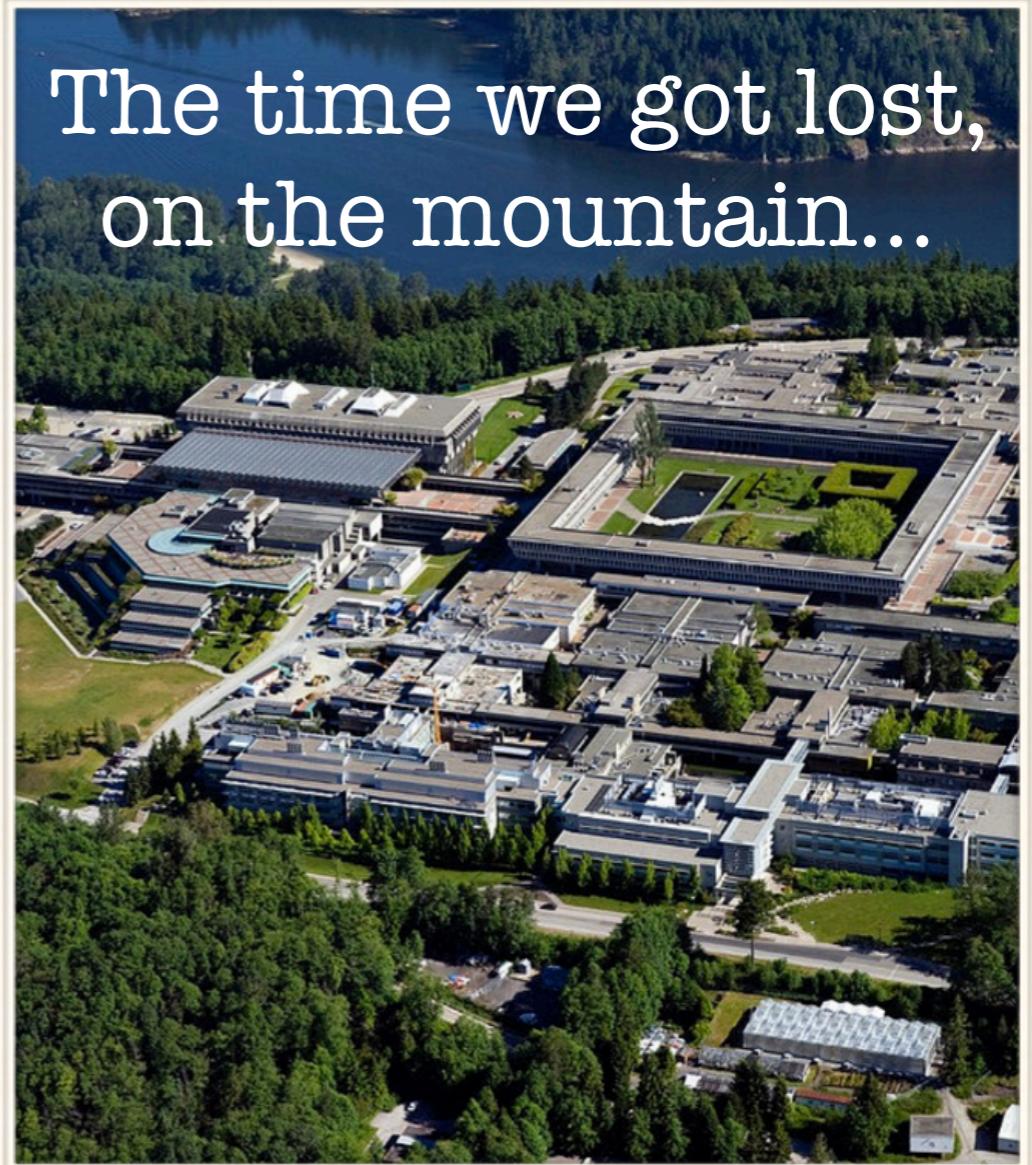
If so, what was the **reason** created that difficulty?

# LET'S DESIGN AN APP!

## SITUATION

### On SFU Burnaby Mountain

- ❖ A small door could lead to a whole building/a group of labs
- ❖ Lack of EXIT guidance
- ❖ Abbreviated building names
- ❖ floor# may relates to the elevation
- ❖ Room# may not be in order
- ❖ Google map cannot find rooms



The time we got lost,  
on the mountain...

# LET'S DESIGN AN APP! PROTOTYPE



# TIME TO DESIGN AN APP!

## DISCUSSION

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What kind of **user** do you think could use this app?

What kind of **task** do you think should the app provide?

# LET'S DESIGN AN APP!

## USERS & TASKS

User Description	Task Description
Alice (22), first year CS master's student, Canadian, living with parents in Downtown Vancouver, so she just needs to take 135 bus to SFU Burnaby Campus. Alice just returned back from Japan, so she didn't get the chance to walk around the campus.	Today she has her very first class, the course system shows the class is in AQ4130 at 9:30am. The bus was late because of the traffic. She got to SFU Bay 2 Station at 9:20am. She doesn't know what does "AQ" mean and could not find it through Google Map.
Bob (45), Principle Research Scientist from Microsoft Research, Redmond, WA, USA. He left Redmond at 6am today, because of the traffic, after 4 hours driving, he got to SFU Burnaby Campus at 10 am.	Bob has a public speaking about Database System at 1pm in ASB9015. He wants to find a parking lot close to the building first, then finds a restaurant nearby for lunch, he also hopes to get some coffee. Finally, he plans to get to ASB9015 before 12:20pm.
Cindy (50), from China, cannot speak English. Today, she and her husband is attending her daughter's graduation ceremony. At 9:30am. her daughter was standing among hundreds of new graduated students in front of Bennet Library. Cindy's husband was busy with taking photos. Cindy suddenly wants to use the bathroom.	Near Bennet Library, she searched for a bathroom from Maggie Benston Center to high land pub to Dimond Family Center, and finally found one. When she left the bathroom, she also got lost a little bit before finding the way to her seat in front of Bennet Library. The bathroom hunting experience made her feel exhausted at this age.

# TIME TO DESIGN AN APP!

## DISCUSSION

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**With Task-Centered Design Method**

What kind of **users** do you think we should **target**?

What kind of **task** do you think **must/should** be included?

# LET'S DESIGN AN APP!

## TASK-CENTERED REQUIREMENTS

### ❖ Users

- New students/faculty members
- Academic Visitors
- Tourists
- People with disabilities
- People with language barriers
- Other

### ❖ Tasks

- Auto Reminder
  - Notice to install for first-time visitors
  - Extract schedule from calendar or course system
- Translator
  - Language choices
  - Clarify building names/floor#
- Road Guidance
  - Walking/Biking/Driving guidance
  - Time estimate
  - Explanation of building names & floor numbers
- Search Nearby
  - Map buildings around
  - Search parking/bathroom/cafe nearby

# LET'S DESIGN AN APP!

## INITIAL INTERFACE DESIGN WITH TASK WALKTHROUGH

### **Let's use Alice as the Task Walkthrough example**

User Description	Task Description
Alice (22), first year CS master's student, Canadian, living with parents in Downtown Vancouver, so she just needs to take 135 bus to SFU Burnaby Campus. Alice just returned back from Japan, so she didn't get the chance to walk around the campus.	Today she has her very first class, the course system shows the class is in AQ4130 at 9:30am. The bus was late because of the traffic. She got to SFU Bay 2 Station at 9:20am. She doesn't know what does "AQ" mean and could not find it through Google Map.

# LET'S DESIGN AN APP!

## INITIAL INTERFACE DESIGN WITH TASK WALKTHROUGH

**Feel free to speak out at any time,  
what we could improve the design during the walkthrough**

# LET'S DESIGN AN APP!

## INITIAL INTERFACE DESIGN WITH TASK WALKTHROUGH

**User:** Alice

**Task:** Get to AQ4130 within 10 mins



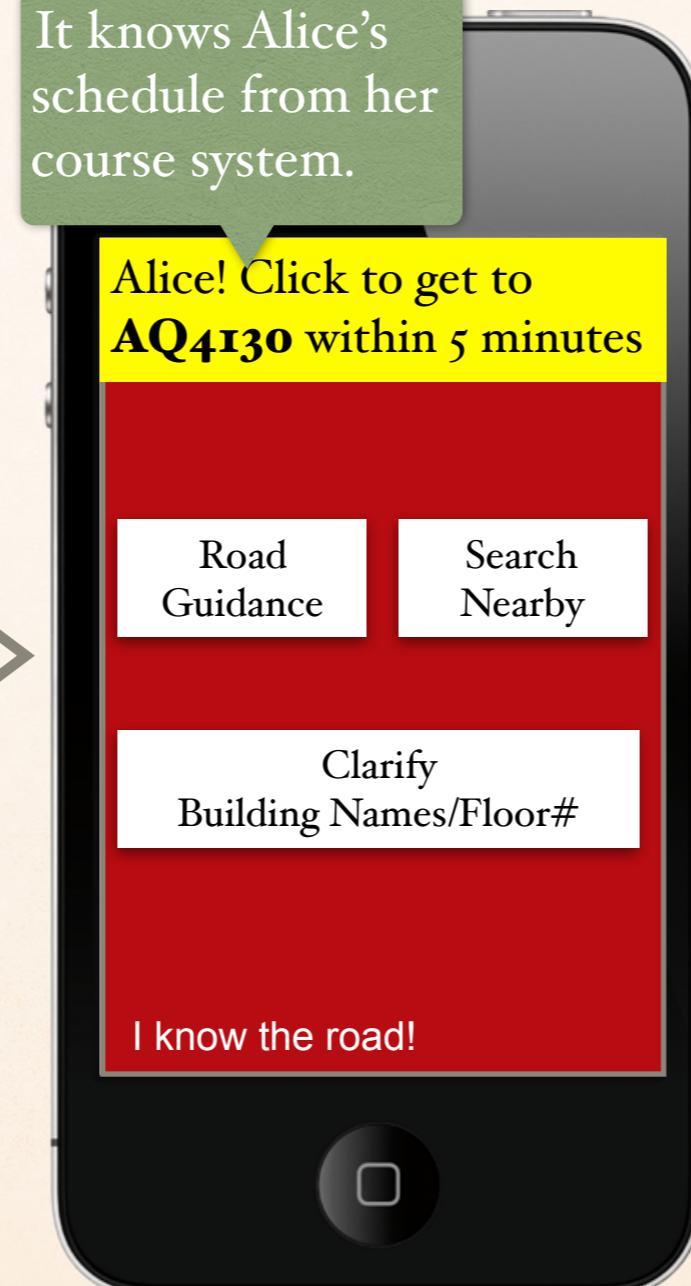
# LET'S DESIGN AN APP!

## INITIAL INTERFACE DESIGN WITH TASK WALKTHROUGH

**User:** Alice



**Task:** Get to AQ4130 within 10 mins



It also clarifies the building name & floor number.

# RECAP

- ❖ Strength and weakness of different **requirements gathering** methods
- ❖ **Rapid Ethnography**
  - Narrow the focus of field research
  - Interactive observations
  - Collaborative and computerized interactive data analysis
- ❖ What is **task-centered design** and when to use it
- ❖ **Task-Centered Design Process**
  - Situation, Prototype, Users & Tasks, Task Walkthrough, Task Centered Requirements, User Interface