



# Requirements Engineering (Summer 2022)

Prof. Nan Niu ([nan.niu@uc.edu](mailto:nan.niu@uc.edu))

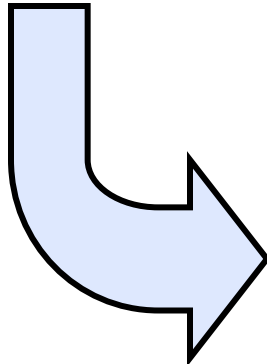
<https://github.com/nanniu/RE-Summer2022>



## Today's Menu

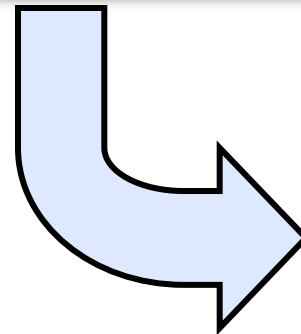
Thursday (July 21)

Tracing effectiveness  
Learning-based methods



Friday (July 22):

Latest to be early  
RE research  
ASN5 release



Monday (July 25):

RE Story presentations  
Course summary

Zihan, Hongxi,  
Liang, Mengting,  
Yuhui, Xiaohuo



# Monday's RE Story Presentations

→ 5-10 minutes per person & **all** the students are required to attend **all** the presentations

↳ Hewei

↳ Linfang

↳ Wei

↳ Wenying

↳ Yingkai

↳ Ting

↳ Tianlong

↳ Sihai

↳ Yinghan

→ Followed by **Course Summary**



**ASN5:  $i^*$  model slicing for feature interaction**

**→ Deadline: 11:59pm, Friday, July 29, 2022**

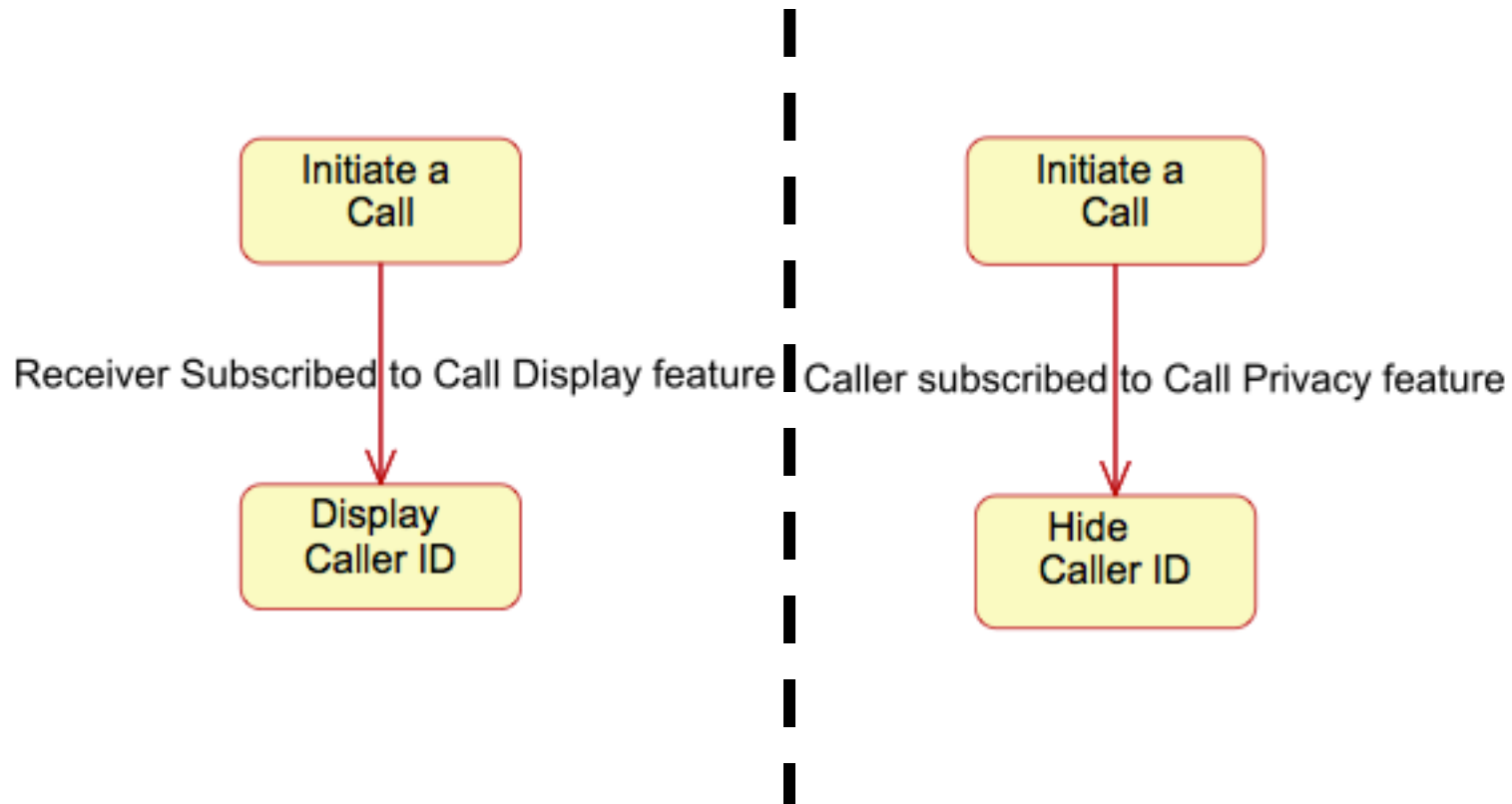
**→ What is feature interaction?**

**If “ $E, F1 \vdash R1$ ” and “ $E, F2 \vdash R2$ ”,**

**but “ $E, F1 \parallel F2 \text{ (not } \vdash) R1 \wedge R2$ ”,**

**then  $F1$  and  $F2$  interfere with each other (or there is a feature interaction between  $F1$  and  $F2$ )**

# Feature interaction examples



→ Example #2: My iPhone (see steps later)

## Feature interaction *more* examples

### → Example #3:

↪ Close door (F1) and then lock door (F2) → works

↪ Lock door (F2) and then close door (F1) → doesn't work



### → Example #4: Tuesday, July 19, 2022 (Day06)

↪ Present as a co-host (F1) → works

↪ Polling (F2) → works

↪ F1 and then F2 → doesn't work

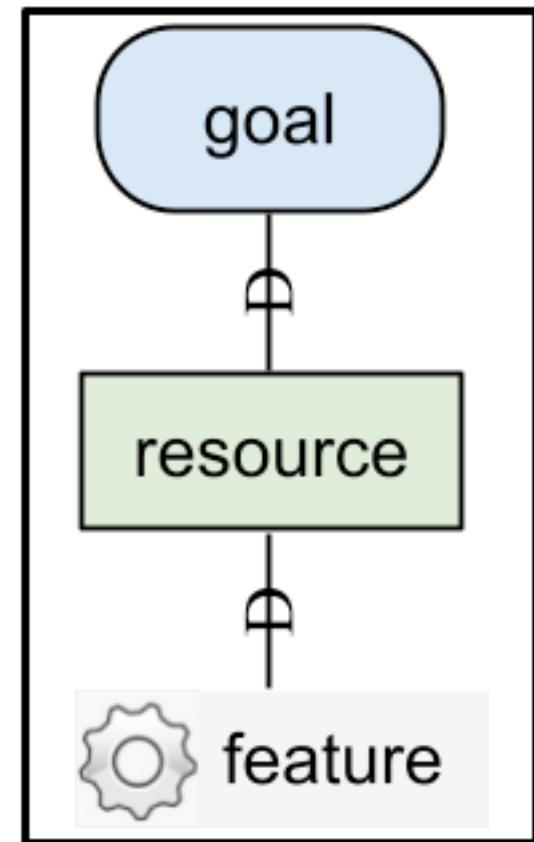
# Many reasons why features interact

→ One of them is *resource contention*

→ Goal model slice

↳ ASN5 asks you to build at least one goal model slice for each given feature to model feature interactions

↳ The same 3 features as ASN1

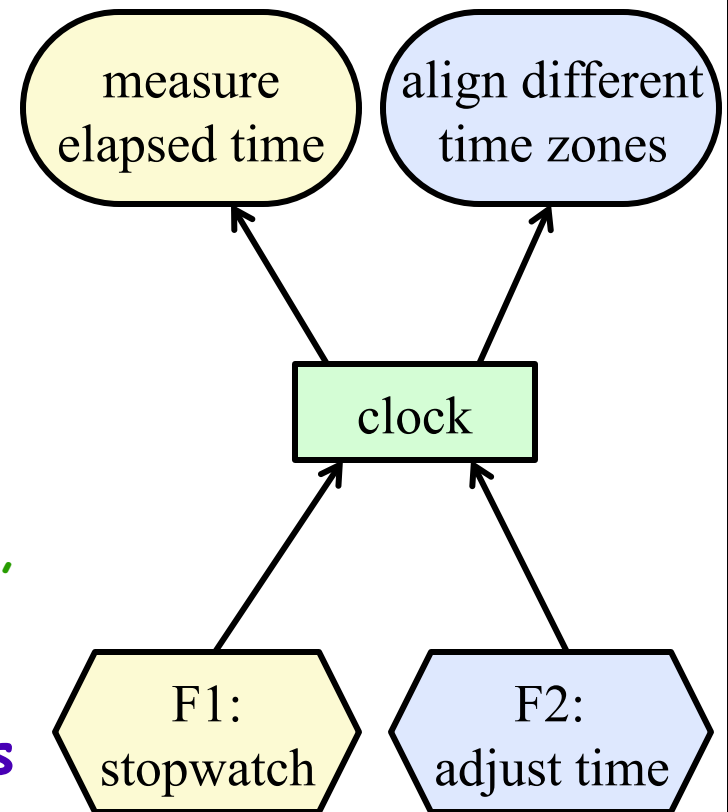


## Here's an example

↪ Goal model slice = Resource dependency of two features & one resource

- Using plain arrows (without 'D') is fine (because we're only modeling resource dependencies)
- Using colors to denote different dependencies is recommended
- Explicitly labeling features (that is, F1 and F2) is a must

↪ Textual description of the steps to reveal feature interaction







## Only the steps *without actual testing*

1. Start "F1: stopwatch" at 10:00pm
2. Change the system time to the next day to mimic (or simulate) traveling to a different time zone, and hence trigger "F2: adjust time"
3. The expectation is to observe the effect of "F1: stopwatch" accurately reflect the elapsed time, even in the presence of a potentially interacting F2

Describe the *most efficient* sequence of testing steps



## ASN5 notes

- ↪ Three features are provided, and for each feature, please build *at least* one goal model slice and describe the testing steps & the expectation
- ↪ Let's focus on feature interaction of *two features* for ASN5, please stay simple & pairwise for now
- ↪ Although the DEADline is 11:59pm, Friday (July 29), feel free to email me ([nan.niu@uc.edu](mailto:nan.niu@uc.edu)) your ASN5 solution by attaching PDF, PNG, ... files as soon as you're done with it. I'll email you back my comments and your grade

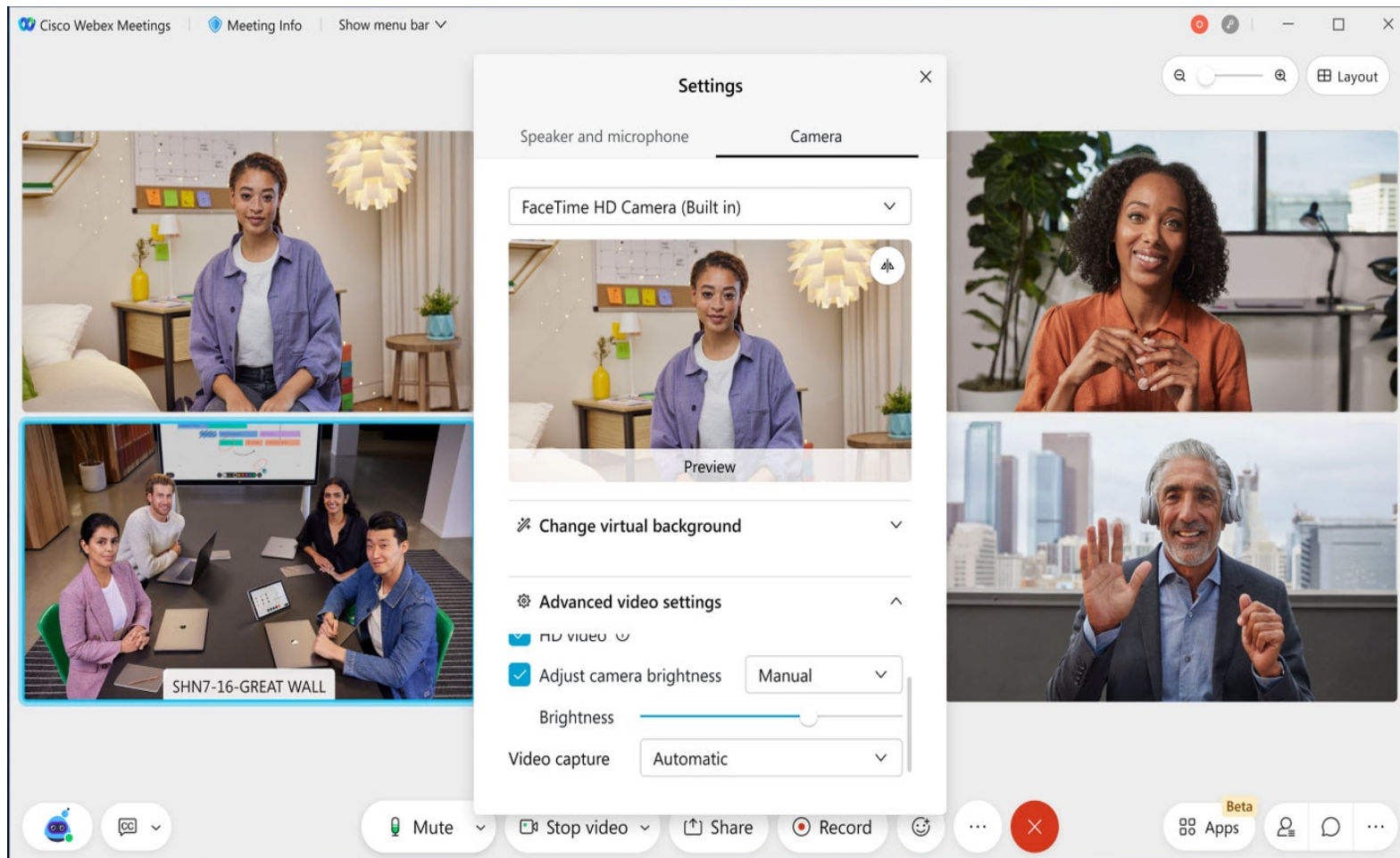


## F1: Adjust camera brightness

Under the camera settings, there's a new option to adjust the camera brightness. Enable this feature by checking the box to automatically adjust the camera brightness. This can help with low light or other challenging lighting environments. You can also select Manual in the drop-down menu to enable this feature. This enables a slider control, allowing you to manually adjust the camera brightness level to the desired level.



# F1: Adjust camera brightness (Cont'd)





## F2: Optimize your voice

You can filter out background voices and noises that would normally be picked up by your mic from your voice to create a better and more engaging experience during your meetings and events.



## F3: Attendance and registration reports

As a host you have access to meetings and events attendance and registration reports in one place to better understand a meeting or event's turnout. In the Registration report view, you can look up someone's registration. You can choose to view individual registration by clicking on the registrant's name and export reports to a CSV formatted file that is available for both reports.



## F3: Attendance and registration reports (Cont'd)

The screenshot shows the Webex interface for a meeting titled "Cloud First Briefing" by Isabelle Brennan, held on Friday, April 30, 2021, from 8:30 AM to 10:30 AM. The interface includes a sidebar with navigation options: Home, Meetings, Recordings, Preferences, Insights, Support, and Download. The main content area shows the "Attendance" report, which is a table with the following data:

Name	Connection time	Duration	Connection type
Bryan Romero	10:25 PM - 11:12 PM	60 min	Video endpoint
Justin Chapman	10:23 PM - 11:07 PM	60 min	Video endpoint
Philip Wallace	10:23 PM - 11:24 PM	60 min	Video endpoint

Below the table, there is a button labeled "Export attendance report". The interface also shows a search bar at the top, a language selector set to "English", and a user profile for "Alison Cassidy". The footer includes copyright information for 2018 Cisco and links to the Privacy Statement and Terms of Service.