

Narrative Interviewing

Contextual inquiry is great, but there are times it is not applicable.

- Don't interrupt some people. → soldiers, doctors
- Can't observe if now
 - ↳ CI is too short
 - event of interest is in the past
 - event of interest happens infrequently

Cognitive Task Analysis

refers to the study of how and why experts do what they do.

output: sequence of tasks
and
situation awareness (sensemaking)
decision - making process

need to uncover strategies that an expert may not be able to immediately articulate.

Narrative interviewing is a great way to do cognitive task analysis.

→ also called retrospective interview

Critical Incident Method
Critical Decision Method

Critical Decision Method

2 hour interview about a nonroutine incident.

- 1 subject matter expert (SME)
- 2 interviewers
 - facilitator (also takes notes)
 - note-taker (also asks questions)

PROCESS

- ① Select a nonroutine incident to study
- ② Chart events according to time and sequence of decisions (timeline)
- ③ Trace development of situation awareness (SA)
Note cues, inferences, strategies, decisions

Timeline

Data } how influenced.

SA } how influenced.

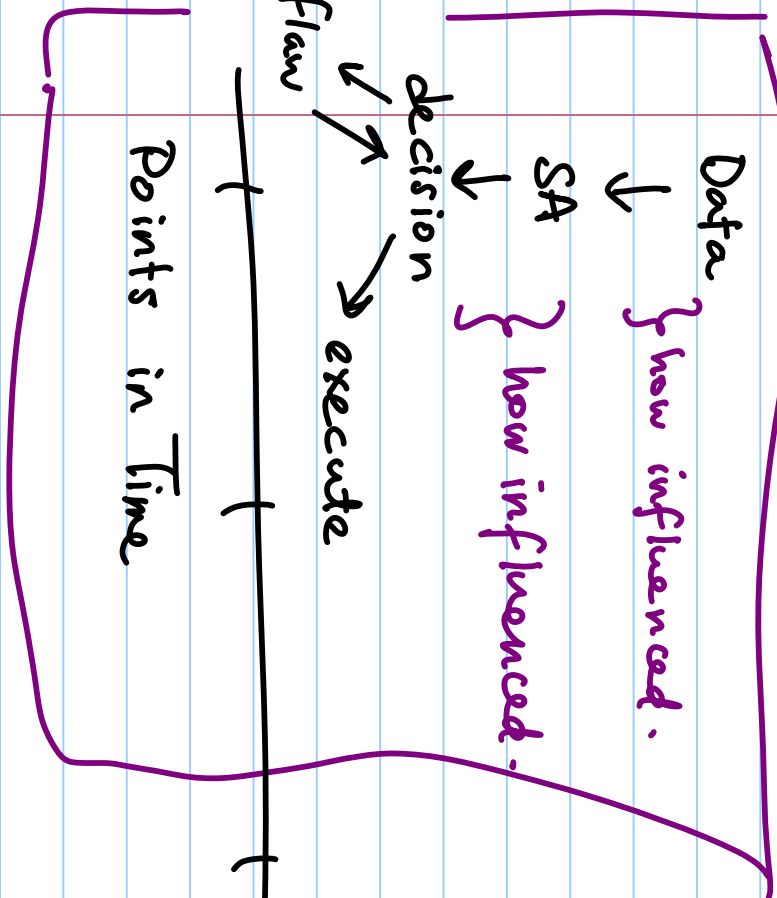
decision

execute

flow

Points in Time

time



CDM Interviews in More Detail

Facilitator: help user recall and articulate incident

Notetaker: take detailed notes
"tag" things to "deepen on"
have questions available

A CDM interview has FOUR SWEEPS.

Sweep 1: Incident Identification

- choose among candidate events
- no advance warning to interviewee

a good incident for CDM:

- ① non-routine
- ② SME is personally involved in decision-making.
- ③ SME's skills stretched.
- ④ SME's SA shifts and changes throughout event
- ⑤ some data is actually wrong or irrelevant
- ⑥ SME relies on prior experience.

} mandatory

Sweep 2: Build and Verify Timeline.

- 2.1 SME — key events in order
— key shifts in SA actions, decisions } let SME
task, don't interrupt

- 2.2 Then FACILITATOR repeats timeline to confirm understanding of SME's perspective.
confirm "key" things are actually key
Timeline on Whiteboard
→ visible to SME at all times.

- 2.3 SME and Facilitator go over timeline AGAIN.
Fill gaps. Fix inconsistencies. Add actual timing info if possible. ✓

Sweep 3: Deepening

return to start of timeline

- expand start

- ask for

cues (data you see, hear, smell, notice)
data

relevant previous experiences

goals

priorities

other options considered.

- how?

- why?

- rules of thumb.

Sweep 4: "What if" Questions

- ① What if a novice was in the situation instead of you?
- ② If instead of X, Y happened?
- ③ What tools could have helped you?

Output of a CDM Interview

- ① To each sentence or concate thought, apply a tag or code

Most common codes

- ① Cue
- ② Expectation / Appraisal
- ③ Goal
- ④ Decision or Action

Other codes

- ① Fact / Knowledge
- ② Contingency
- ③ Flaw

Also, you can break up interview transcript into Situation Assessment Chunks.

Each chunk is about 1 discrete cue → decision process.

Output of a CDM Interview:

2. Decisions that are Most Important
→ decision-based design

Decision Requirements Table,

