

dr. András Rung

Voice-based interface design

From whom is this relevant?



16% illiterate



14% younger than 6 years



2% viusally impaired



10% dyslexic

When?



occupied hands



cheap gesture



passive



group-based

Why is it interesting?

- Alexa and Google home will shake things up
- Still before the starting line in Hungary
- Moving past IVR
- The death of VUI or GUI?

Chatting or taking care of business

From butler to friend

- Situation-dependent adaptation (task, intent)
- Co-reference and context management
- A mix of visual and voice-based solutions
- Expectation management

Sample conversations

Creating the interface's backbone

- On-site work and interviews
- Creating succesful conversation paths using dagram drawers
- Nuance Mix, Api,.ai, Wit.ai
- Creating visual screens

Processes



Grammar-building

Utterances, Slots, and Intents

Alexa, ask Skill Master what are skills?



Tell me more about what skills are.



DefinitionIntent {value: "skills"}

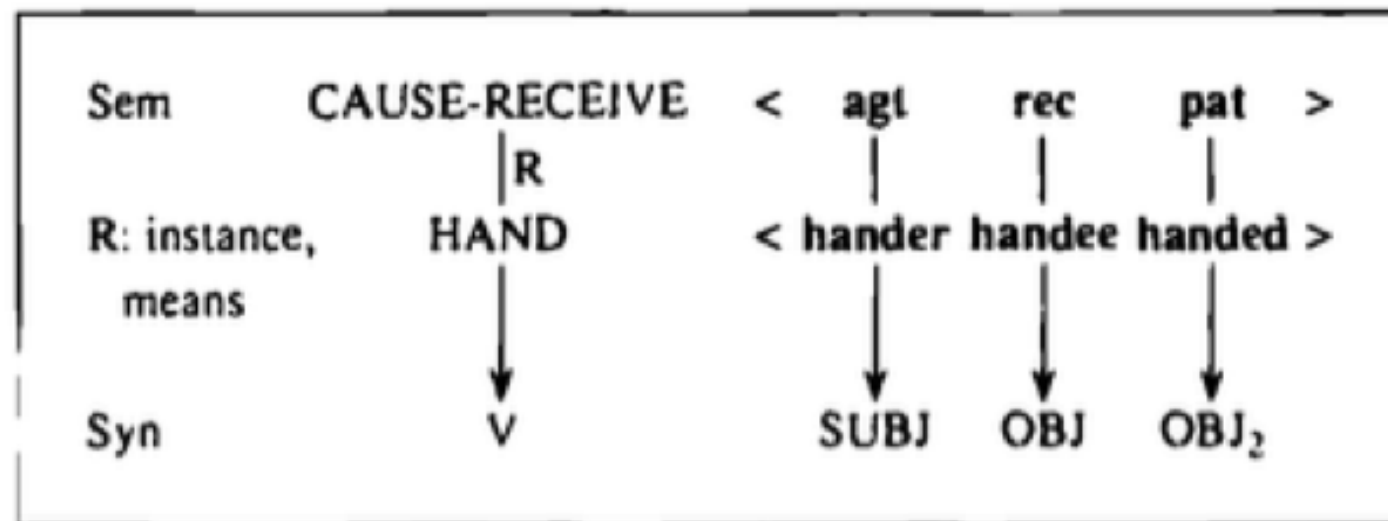


Constructive grammar

VUI and modern language theory?

- Wildcards and logical inputs
- Fillmore, Goldberg
- Complex opportunity management

Composite Fused Structure: *Diransitive + hand*



Confirmation

- Three-level feedback
- Clearly: The weather in San Francisco is...
- Not a linguistic signal
- Generic: I'm sorry to hear that
- Visual

Troubleshooting, assistance

- No speech
- No interpreted speech
- Processed but not managed speech
- Poorly recognised
- Beginners and proficient user management
- Assistance and corrections opportunities

Clarification, versions

- Too much information: I have a headache and nausea...
- Input variation management: fridge, refrigerator, chiller, cooler, ice-box
- What is the temperature in Venice?/ Call John.
- Asking back or guessing

Intentions, complex data entry

- Show me my calendar / add an event / delete event stb.
- Emotion detection based on voice and keywords
- Nonlinear completion of complex forms

Thank you for your attention!

Név: András Rung
Mobil: + 36 30 397 5008
Email: andras.rung@ergomania.eu



OTP Bank

22th February 2017.



ergomania.eu