Situated Interaction

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This week:

Discussion	Levels of Interaction
Presentations:	
Group 8:	Thomas, Golina
Group 7:	Kevin, Angela
Group 2:	Isabel, Nicolas, Johann
Next week:	
Groups:	3, 5, 6, 9, 10, 12

Framework: Instruments and Substrates

	Instruments	Substrates
	Actions (input)	*Effects (output)*
Reification	If command disappears, make it persist	If a relationship disappears, make it persist
Polymorphism	Make it handle multiple types of objects	Make it handle multiple types of relationships
Reuse	Make it reuse user input	Make it reuse user output

Robert's link example: Linking across devices

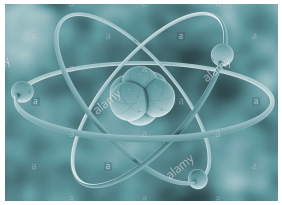
	Instruments	Substrates
	Actions (input)	*Effects (output)*
Reification	If command disappears, make it persist • *Create a tool that links different devices*	If a relationship disappears, make it persist • *Create a continuous channel to link devices*
Polymorphism	Make it handle multiple types of objects • *Handle diverse devices: phone, tablet, wall, watch*	Make it handle multiple types of relationships • *Handle different linking relationships*
Reuse	Make it reuse user input • *Reuse or share previous shared content*	Make it reuse user output • *Reuse previously established configurations*

New example?

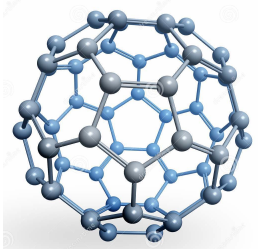
	Instruments	Substrates
	Actions (input)	*Effects (output)*
Reification	If command disappears, make it persist	If a relationship disappears, make it persist
Polymorphism	Make it handle multiple types of objects	Make it handle multiple types of relationships
Reuse	Make it reuse user input	Make it reuse user output

How do we think about Interaction?

We analyze the physical world
at different levels of abstraction



molecule



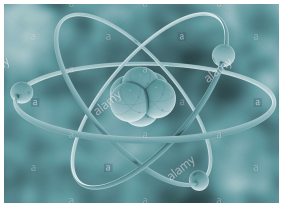
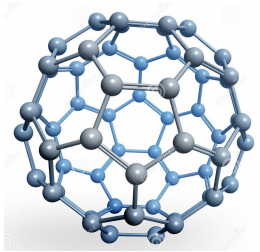
atom

wood

hammer

How do we think about Interaction?

We analyze the physical world
at different levels of abstraction

What is the equivalent for the digital world?
especially for interaction?

Analogy

Interaction Levels

Alphabet

Atomic User Actions

Cursor-based
- Point
- Activate
- Trace
- Keystroke

Touch-based
- Tap
- Swipe
- Pinch

Analogy

Interaction Levels

Vocabulary

Interaction Techniques

- Interactor (widget)
- Drag 'n drop
- 2D gesture recognition
- Voice input
- Tangible input
- 3D gesture recognition

Alphabet

Atomic User Actions

Cursor-based

- Point
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- Trace
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Touch-based

- Tap
- Swipe
- Pinch

Analogy

Interaction Levels

Syntax — Interaction Patterns

- Form
- Tool palette
- Selection
- Dialog box
- Inspector

} no order; verb – oject + parameters; object – verb + parameters

Vocabulary — Interaction Techniques

- Interactor (widget)
- Drag 'n drop
- 2D gesture recognition
- Voice input
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- 3D gesture recognition

Alphabet — Atomic User Actions

Cursor-based
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Analogy	Interaction Levels	
Semantics	**Interaction Tasks**	
	• Input • Choose • Trigger	• Navigate • Transform
Syntax	**Interaction Patterns**	
	• Form • Tool palette • Selection • Dialog box • Inspector	no order verb – oject + parameters object – verb + parameters
Vocabulary	**Interaction Techniques**	
	• Interactor (widget) • Drag 'n drop • 2D gesture recognition	• Voice input • Tangible input • 3D gesture recognition
Alphabet	**Atomic User Actions**	
	Cursor-based • Point • Activate • Trace • Keystroke	Touch-based • Tap • Swipe • Pinch

Analogy	Interaction Levels	
Interaction Snippets	**Interaction Sequences**	
	• User-initiates	User acts – System reacts – User reacts
	• System initiates	System acts – User reacts – System reacts
Semantics	**Interaction Tasks**	
	• Input	• Navigate
	• Choose	• Transform
	• Trigger	
Syntax	**Interaction Patterns**	
	• Form	no order
	• Tool palette	verb – oject + parameters
	• Selection	
	• Dialog box	object – verb + parameters
	• Inspector	
Vocabulary	**Interaction Techniques**	
	• Interactor (widget)	• Voice input
	• Drag 'n drop	• Tangible input
	• 2D gesture recognition	• 3D gesture recognition
Alphabet	**Atomic User Actions**	
	Cursor-based	Touch-based
	• Point	• Tap
	• Activate	• Swipe
	• Trace	• Pinch
	• Keystroke	

Analogy	Interaction Levels		
Design Artifacts	**Conceptual Representations**		
	Abstract • Interaction tables • Architecture diagrams	**Temporal** • Scenario • Video prototype • Marketing pitch	**Spatial** • Layout templates • Wire frames
Interaction Snippets	**Interaction Sequences**		
	• User-initiates • System initiates	User acts – System reacts – User reacts System acts – User reacts – System reacts	
Semantics	**Interaction Tasks**		
	• Input • Choose • Trigger	• Navigate • Transform	
Syntax	**Interaction Patterns**		
	• Form • Tool palette • Selection • Dialog box • Inspector	no order verb – oject + parameters object – verb + parameters	
Vocabulary	**Interaction Techniques**		
	• Interactor (widget) • Drag 'n drop • 2D gesture recognition	• Voice input • Tangible input • 3D gesture recognition	
Alphabet	**Atomic User Actions**		
	Cursor-based • Point • Activate • Trace • Keystroke	**Touch-based** • Tap • Swipe • Pinch	

Next week:

Presentations: (order to be decided next week)

Group 3:	Anqi, Vennila, Eleonora
Group 5:	Camille, Damien
Group 6:	Eurus JiayiNoha
Group 9:	Julia, Floriana, Wissal
Group 10:	Yoon, Adrián, Maria
Group 12:	Francesco, Francesco