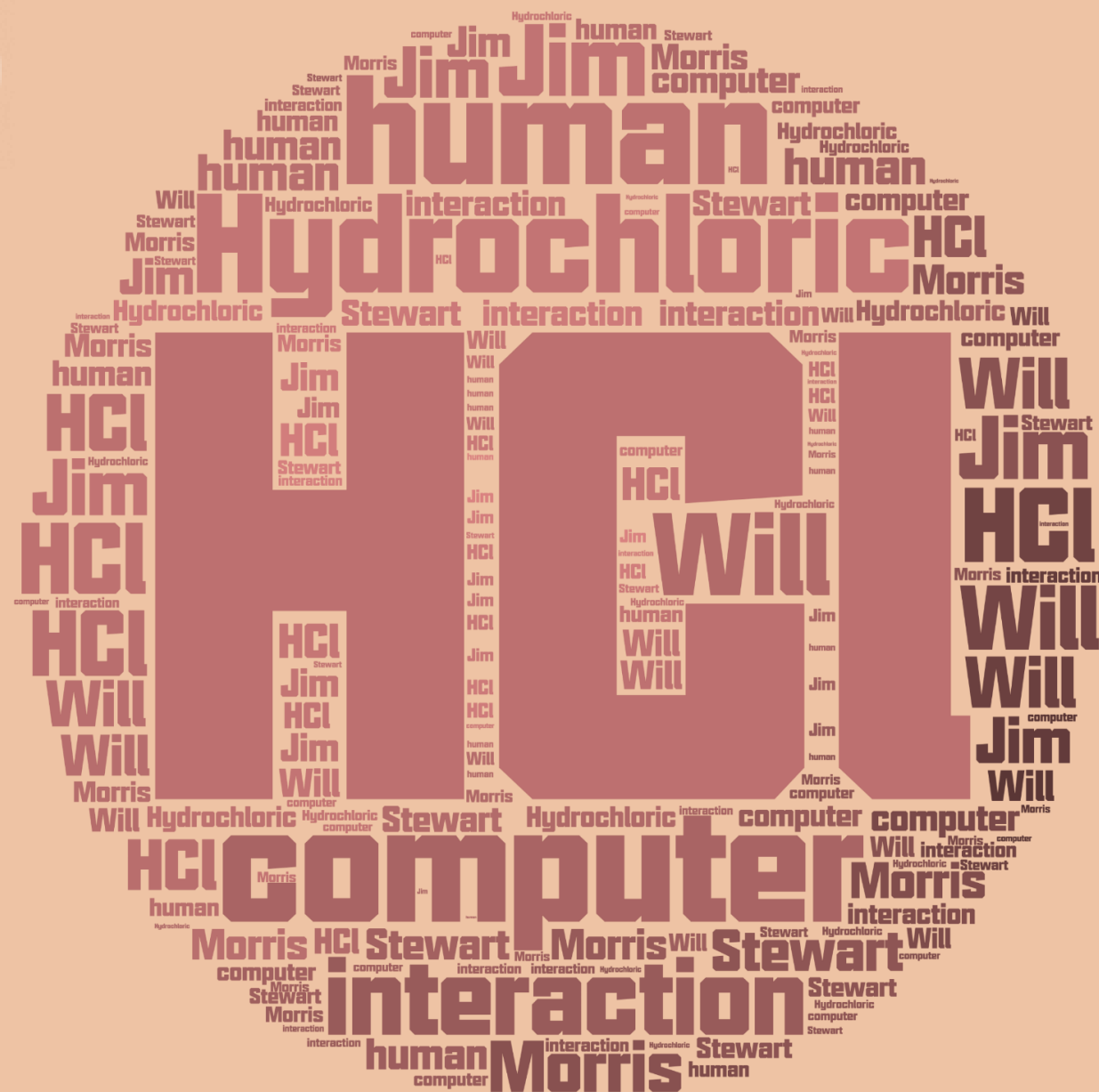


Lancaster University College
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CNSCC.202: HCI GROUP3 TASK-1

Haotian Sang
Chenhui Mao
Xiao Xie
Yuekai Yin
Zhuohua Qi





	VHT		
	Vision	Hearing	Touch
Capability	<p>Receive information about environment visually</p> <ol style="list-style-type: none"> 1. Size and depth 2. Brightness 3. Color 4. Movement 5. Changes in luminance 	<p>Provide information about environment acoustically</p> <ol style="list-style-type: none"> 1. Distances, direction 2. Through pitch, loudness, Timbre 	<p>Provide feedback about environment</p> <ol style="list-style-type: none"> 1. Thermoreceptors 2. Nociceptors 3. Mechanoreceptor
Limitation	<ol style="list-style-type: none"> 1. Color blind people 2. Sight impaired people 3. Optical illusions 	<ol style="list-style-type: none"> 1. Less accurate distinguishing high frequencies than low 2. Hearing impaired people 	<ol style="list-style-type: none"> 1. Hard to implement 2. Finger impaired people
Implication	<ol style="list-style-type: none"> 1. Provide a bold color that can caught one's attention 2. Using comfortable color 	<ol style="list-style-type: none"> 1. Sounding information should be at human acceptable level 2. Using comfortable and clear sound 	<ol style="list-style-type: none"> 1. Touching level should be at human sensible level 2. Different information should be transfer distinct touching feeling.



	MEMORY		
	Sensory Memories	Short-Term Memory	Long-Term Memory
Capability	<p>Buffers for stimuli received through senses</p> <ol style="list-style-type: none"> 1. Iconic memory 2. Echoic memory 3. Haptic memory 	<p>Scratch-pad for temporary recall</p> <ol style="list-style-type: none"> 1. Accessed rapidly(70ms) 2. Decay rapidly(200ms) 	<p>Repository for all our knowledge</p> <ol style="list-style-type: none"> 1. Huge, unlimited capacity 2. Slow access time ~1/10 s 3. Slow decay
Limitation	<ol style="list-style-type: none"> 1. Constantly overwritten 2. Can only selectively attend to one of above stimuli 	<p>Limited capacity: 7 ± 2 chunks</p>	<ol style="list-style-type: none"> 1. Need to rehearsal (repetition) 2. Easier to remember things that represent objects 3. Interference
Implication	<p>Focus on one aspect rather than all above</p>	<p>Design in chunks within 5-9, which can be easier to remember (such as website)</p>	<ol style="list-style-type: none"> 1. Place the commonly used tool in conspicuous position 2. Icon should relevant to the purpose



THINKING: REASONING

	THINKING: REASONING		
	Deductive Reasoning	Inductive Reasoning	Abductive Reasoning
Capability	Derive logically necessary conclusion from given rules	Generalize from cases seen to cases unseen	Reasoning from event to cause
Limitation	<ol style="list-style-type: none"> Often be misapplied Sometimes truth and validity clash 	Unreliable (can only be proved to be false not true)	Unreliable (can lead to false explanations)
Implication	If validity rather than truth was preferred, all premises would have to be made explicit.	<ol style="list-style-type: none"> Gather as much as evidence to support inductive inference Check negative evidence to test the truth of the statement 	<ol style="list-style-type: none"> Avoid an event always following an action Provide evidence to the contrary



THINKING: PROBLEM SOLVING

Capability

1. Process of finding solution to unfamiliar task using knowledge
2. Several theories (Gestalt, Problem space theory, Analogy)

Limitation

1. Gestalt: not provide sufficient evidence or structure to support its theories
2. Problem space theory: operates within the constraints of the human processing system; limited by the capacity of STM, and the speed at which information can be retrieved
3. Analogy: people often miss analogous information, unless it is semantically close to the problem domain

Implication

1. Gestalt: combine different components, prepare sufficient information which relevant to it
2. Problem space theory: delete redundant components, classify the data
3. Analogy: the analogous semantical information needs to be close to the problem domain.



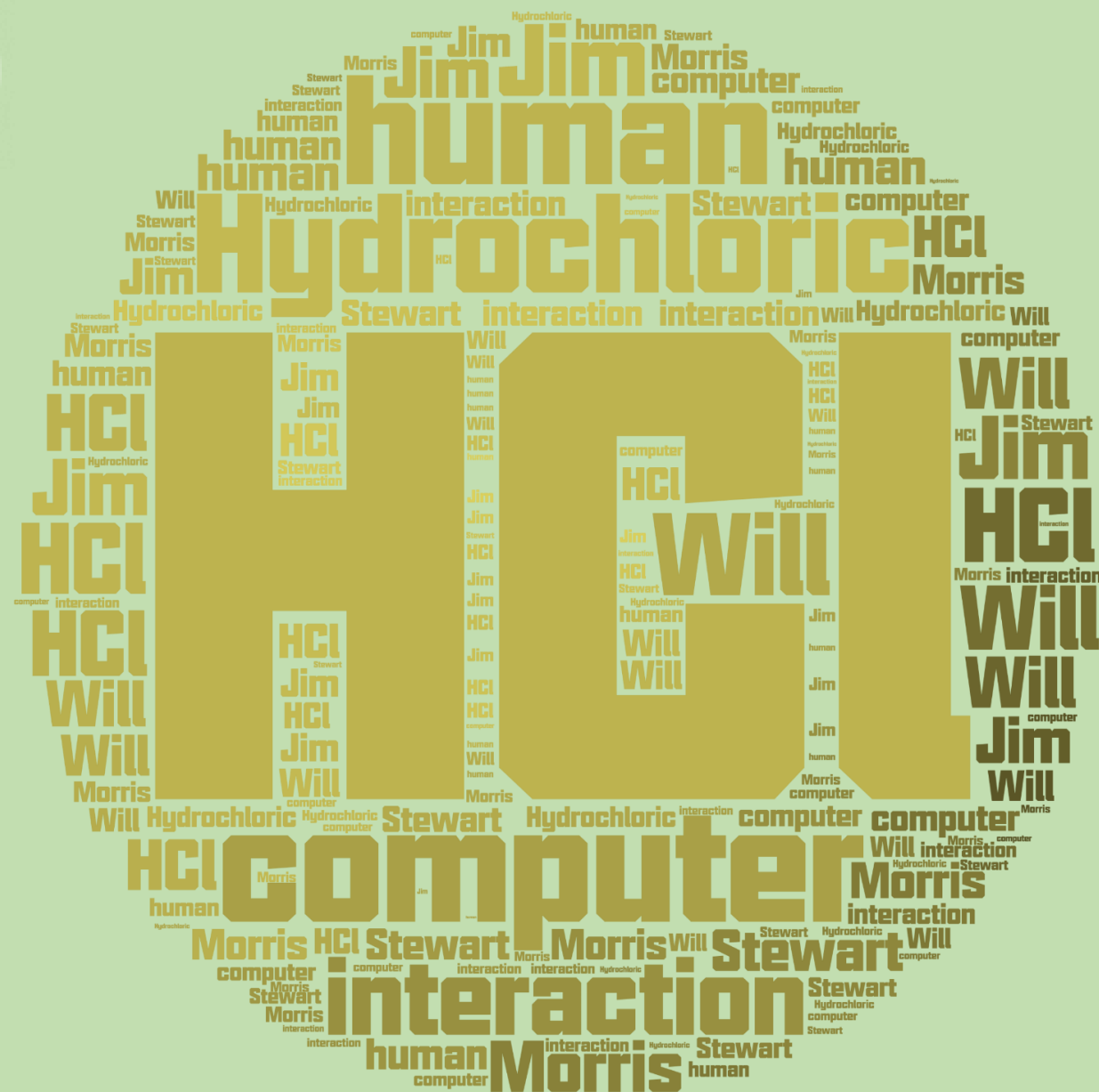
	EMOTION
Capability	<div><div>1. Involves both cognitive & physical response</div><div>2. Affect influence our respond to situation</div></div>
Limitation	Negative affect can make it harder to do easy job
Implication	Design a delightful interface that can stimulate positive emotion, rather than a frustrated interface that can stimulate negative emotion.

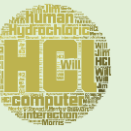
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CNSCC.202: HCI GROUP3 TASK-2

Haotian Sang
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Xiao Xie
Yuekai Yin
Zhuohua Qi





1. Add “one-touch calling” button:

- I. Provide manual service
- II. Call the police



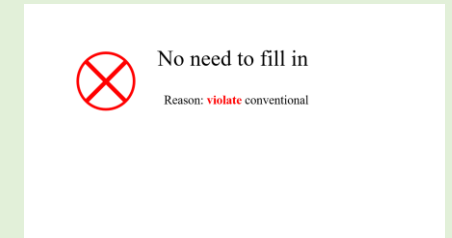
2. Multilanguage support:

- I. Provide service for multi-lingual clients
- II. Provide voice service for dialects



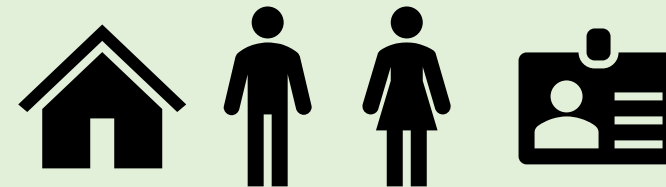
3. Warning on the screen:

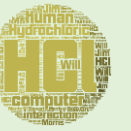
1. Remind of unclear handwriting or put the form in the wrong area
2. Reminding by vibration



4. Adapt bold font to key words and Add figures:

1. Reduce reading cost
2. Conspicuous marking





5. Rational distribution:

- I. Consider left-hander and other special crowd
- II. Reduce moving cost

- I. Integrated in Integration
- II. to existing machine in the bank
- III. Simplify the whole system

Work Division



Presentation:

Task1: Mao Chenhui

Task2: Sang Haotian

PPT:

Qi Zhuohua, Sanghaotian

Task1:

VHT: Xie xiao

Memory: Mao Chenhui,

Thinking-Reasoning: Qi Zhuohua,

Thinking-Problem Solving: Sang Haotian

Emotion: Yin Yuekai



Task 2:

Part1: Yin Yuekai

Part2: Xie Xiao

Part3: Mao Chenhui

Part4: Sang Haotian

Part5: Qi Zhuohua