



# Human-Computer Interaction

Class Code: BSCS-F2015A

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# Introduction to Design Basics (continued)

## Design Tools



- Participatory prototyping
- Means of exploring experience
- Emotions
- Ambiguity and creativity



- Inspiration from theatre techniques
- Developing knowledge through practice
- Performances with probs, mock-ups & Prototypes

- Telling about existing practices
- Introducing change perspectives
- Telling about needs and dreams



# Tools and Techniques

- Document analysis
- Interviews
- Observations
- Future workshop
- Thinking aloud
- Walkshop
- Persona
- Oral narratives and Stories
- Sketching
- Fictional enquiry
- Prototypes and mockups
- Brainstorming
- Storyboard
- Role play
- Probes
- Scenarios
- Card sorting
- Foreign metaphor (what if?)
- Diaries



- Mock-ups
- Paper prototypes
- Probes
- Generative tools
- ..



- Future workshop
- Scenarios
- Fictional enquiry
- Foreign metaphor
- ..



- Observation
- Interview
- Document Analysis
- Thinking aloud
- Sketching
- ..



# Case studies

# eToro: Indigenous Botanical Knowledge Management System

## Toro: Sketching and Forest walks



- **Collecting livelihoods... food and medicine etc.**



- **Activity based platform for knowledge transfer between elder and younger ...hunting techniques making huts and medicinal characteristics of the plants**



- Loss of knowledge;**
  - **Rapid change in the way of Penans' life**
  - **Reluctance of elders to transmit IK to uninitiated youth**

***Problem: Loss of knowledge and Loss of Identity, "If you don't know about the plants, you are not a Penan"***

# Sketching to explore the contextual variables

- ↳ tai ragenis
- ↳ ngetheng mara teng eh juk penifah
- ↳ tengayef pitah penguman/ Belejo
- ↳ ngenian dai juk mihim keluman eh mukus lakau

- ↳ lakau jia lamin tofo ngedan refek eh juk tenavin



- ↳ toro ngedan refek eh juk malai/ tenavin
- ↳ lufan, pengakas manau kaam, keluman tem jah daw, lajau, tabaw, jama.
- ↳ toro ba' - pupat, jala, letai, barang, tubu

- ↳ tai teng refek puma ulan kaan jalan rek befo
- ↳ tai teng refek urut jalan rek palau
- ↳ tai teng refek lalin seluang
- ↳ Kuru refek eh penifah





# Community empowering methodology

## Inclusive Design



Individual



Individual

## Safeguarding their interest



Group

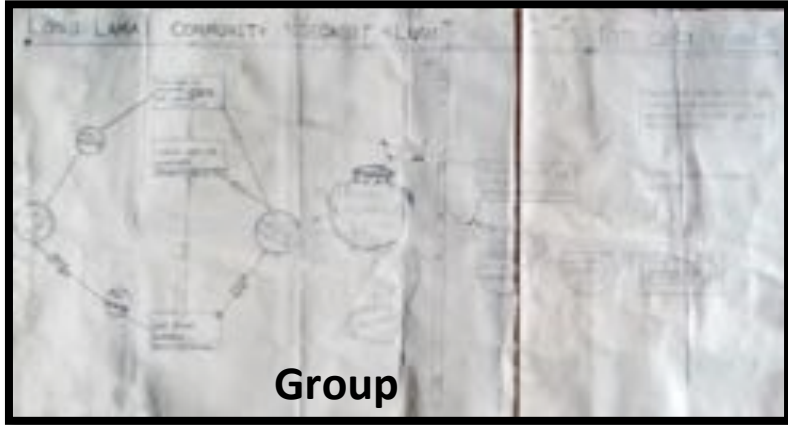
## Customisable to suit particular needs



Group



Individual



Group



Group

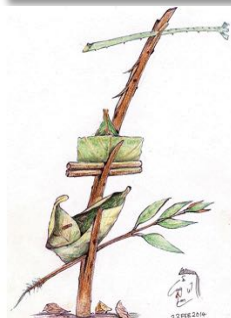
## Collaborative design of meta-data



# Sign Language: Digitisation and Documentation Sketching



We are from the same group. I'm alone, very very hungry and I have only water to survive. I am going to the river in this direction. Follow me and if you have anything to eat please bring along....



# Card sorting: Oroo sign categorisation

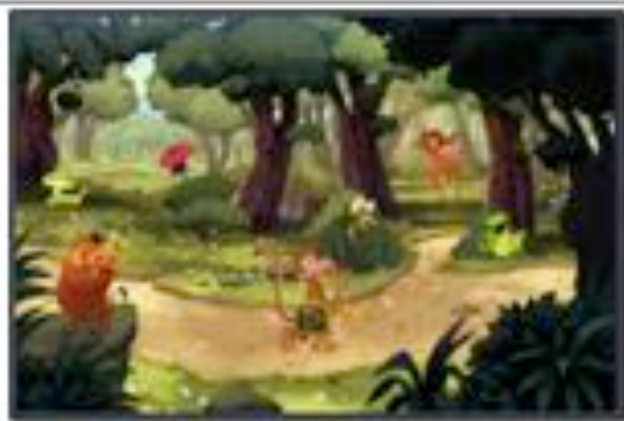


# Scenarios and Storyboards

## Oroo' Treasure Hunt

## Proposal: Oroo' low-cost innovation game

### Scenario one



#### Menu Page

For the menu page, there are only one button which is play button for user to enter the game. The background music is natural sound of rainforest. When user click on the animals, sound of each animal will be played. User can avoid to meet the dangerous in rainforest such as snake and bee by recognize the sound of each animal from the game.



#### Level Page

This page is level page to let user to choose the level they want to play. The levels are locked until user have passed each of the level. User can click on "take our quiz!" button and proceed to the quiz page.



- Scenario one: Two Oroo' adventure games will be created: One built for tablets using Western game design principles. Another built using a culturally aware methodology, incorporating paradigms understandable by the indigenous population.
- Observation, think aloud protocol, and desirability testing will be used to assess qualitatively how usable the indigenous population find each of the interfaces.
- A version of the game will exist with the option of choosing either the adapted or non-adapted version of the game at the title screen. This will allow us to gather quantitative data identifying the most frequently used version of the game, this game could also be left as a "probe" logging this quant data as part of a longitudinal study.

# Persona and Paper prototyping

<p><b>Vasper</b>            -26 years            -Camera Man            -From Long Lamai            -So handsome            -Like Jungle Trekking            -Funny Guy            -Friend of us            -Love Long Lamai and Jungle            -Skinny man            -Hardworking man            -Creative man            -Christian man</p> 	<p><b>Rebecca</b>            -18 years old            -Volleyball            -Singing            -Friendly            -Hillary's friend            -Working at the Telecentre            -From Long Lamai            -Loves creating handicraft            -Loves surfing internet</p> 	<p><b>Clarisse</b>            -25 years old            -Working at Bario            -Love Long Lamai            -From Long Lamai            -So friendly            -Very Kind            -So pretty            -Hard work            -Know how to cook            -Like fishing and singing            -Friend with Erna, Shida, Azlyn</p> 
<p><b>Damon</b>            -20 years old            -Pastor            -Football            -Fishing            -Reading            -Friendly            -Vincent Friend</p> 	<p><b>Cassandra</b>            -40 years            -Handicraft            -Housewife            -Kind person            -Loves to swim            -Strict mother            -Hardworking lady            -From Long Banga            -Love Long Lamai            -Backup singer in church</p> 	<p><b>Alavick</b>            -42 years old            -Boat driver            -Tourist guide            -Reading Bible            -Kind and ugly man            -Garren's friend            -From Long Puak            -Working at clinic Long Banga</p> 

Within less than 15 minutes  
 89 sms texts created  
 one third in Malay and the  
 rest in English.

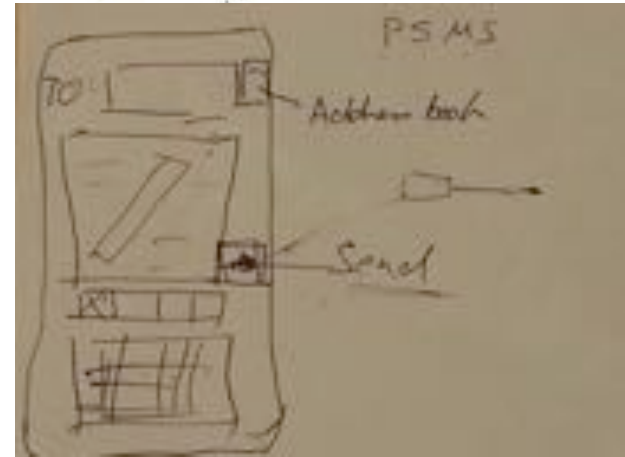
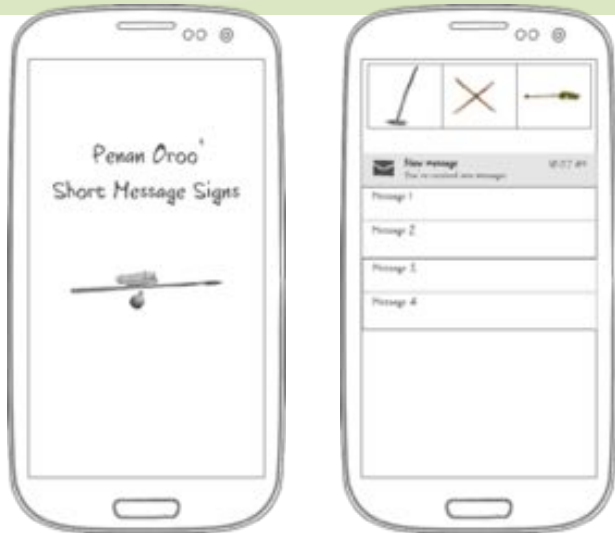
Sample sms:

“What are you doing?”

“Let’s meet at the river”

“what do you mean?”

# PO-SMS: App Screen Layout Design





THANK YOU

