UNITY - A Culturally-Sensitive Environment for Flexible Natural Interaction to Support Transitioning from a Chronic Care Hospital Context

Junia Anacleto
Associate Professor
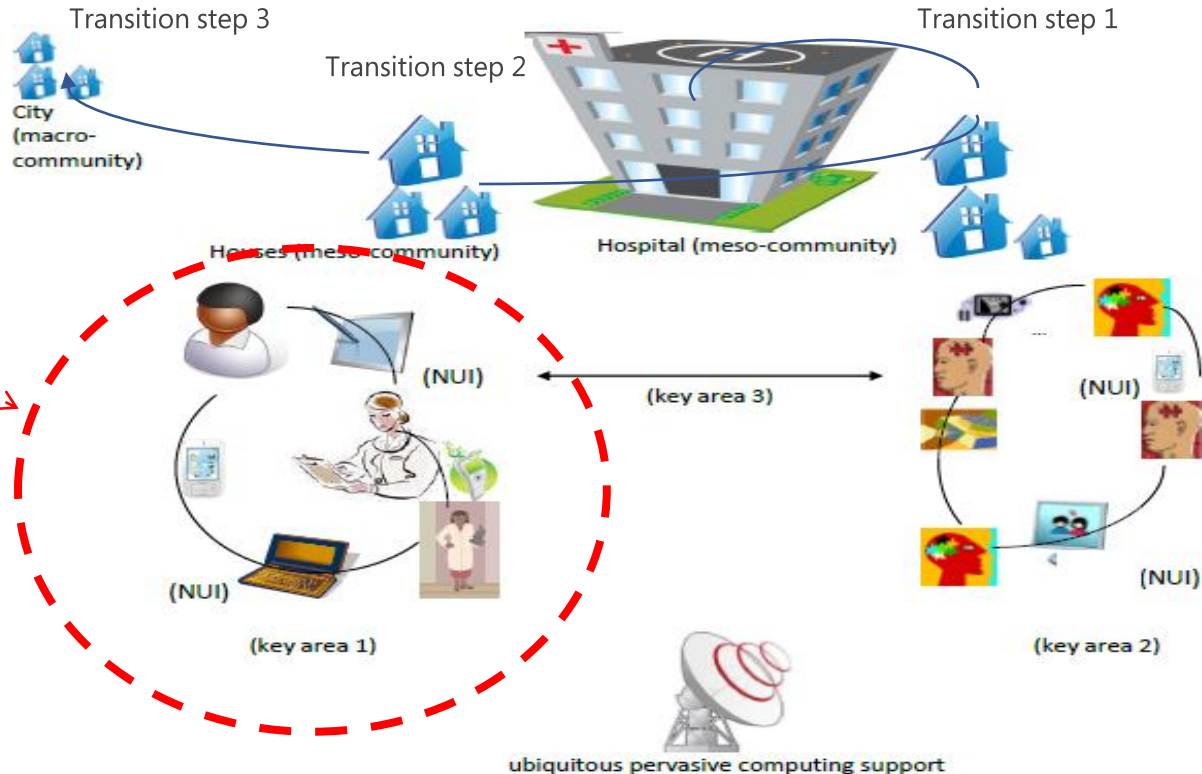Federal University of São Carlos - Brazil

UNITY

NUI – promises and challenges

- Promises
  - Reduce learning time
  - Leverage of the existing human skills (touch, voice, audio....)
  - Allow people to focus on the task not on the technology (cognitive load)
  - Provide the users the sense of Naturalness
- Technical challenges
  - Make it ´invisible´
  - Integrating sense devices and information
  - cultural sensitivity
- Workplace challenges
  - Social network support
  - Workflow Support

UNITY

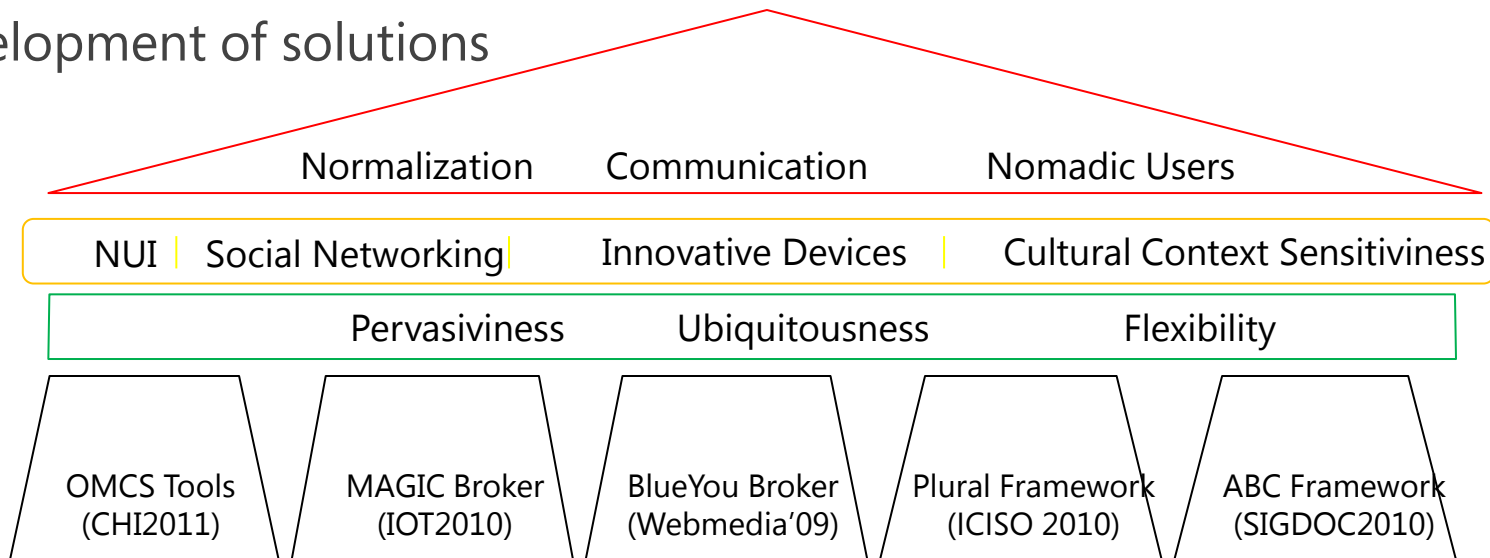## Project Goal – NUI framework and tool for Workflow

Transition step 1

Transition step 2

Transition step 3

City (macro-community)

Houses (meso-community)

Hospital (meso-community)

(NUI)

(key area 3)

(NUI)

(NUI)

(NUI)

(key area 1)

(NUI)

(key area 2)

ubiquitous pervasive computing support

Investigate using NUI based channels to support empathy amongst Health Professionals working on patients' transition process
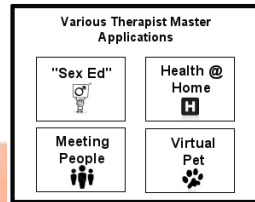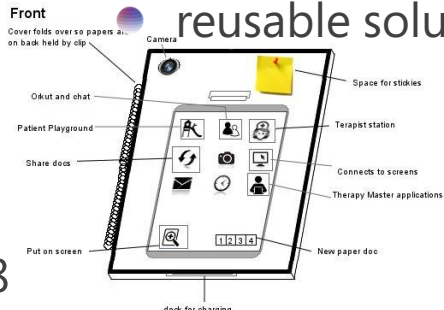
FacultySummit

UNITY
Research Project Focus

- Participatory Design approach
  - requirements' elicitation
  - development of solutions

	Normalization	Communication	Nomadic Users

NUI	Social Networking	Innovative Devices	Cultural Context Sensitiviness

Pervasiviness	Ubiquitousness	Flexibility

OMCS Tools (CHI2011)	MAGIC Broker (IOT2010)	BlueYou Broker (Webmedia'09)	Plural Framework (ICISO 2010)	ABC Framework (SIGDOC2010)

Microsoft Research
FacultySummit

UNITY
Expected Results

- Analysis of workflow requirements for Health Professionals
- Studies of social networks in complex workplace
- Gaining fundamental NUI insights from a non-GUI community
  - never used keyboard/mouse!
- Formalize proof-of-concept framework and technical solution
  - use of culturally sensitive and flexible natural user interface technologies
  - reusable solutions drastically reducing implementation time and effort

Microsoft Research
FacultySummit

UNITY

Step 1 – Meetings with the Director of the Hospital (May 2011)

- Equipments to be installed at the hospital
- Area of the hospital to be covered by UNITY
- Team for the Participatory Design Activities
  - a physiotherapist
  - a psychologist
  - a nurse
  - an occupational therapist
  - an administrative staff
- Agenda 2011
  - One meeting per month from June to Septemb
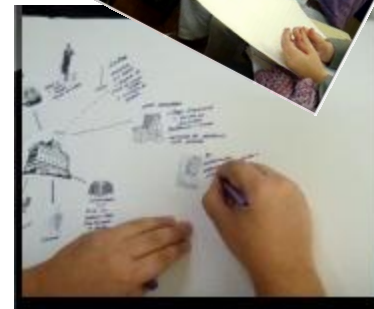 - One Meeting every two months from Novemb

from Pedriatics

UNITY
Step 2 – Participatory Design Meeting (June 30th 2011)

- What is your daily routine?
- With whom you talk to?
- What information do you share?
- When do you fill the docs?
- What is the frequency?

- Observing
  - the flow of information
  - the existing social network

- "There is no routine"
- "We solve the problems on the corridor"
- "We use our own cellphones to talk"

Microsoft Research
FacultySummit

UNITY
Next Steps

- Analyzing the technological solutions (cellphones) spontaneously adopted
- Analyzing the formal and the informal flow of information
- Analyzing the formal and the informal workflow
- Designing the existing social network

Thank you

- Prof Carlos Brito – FAPESP
- Juliana Salles – Microsoft Research - Brazil

UNITY
Team of Researchers

A. Carlos Santos/FMRP-USP

Vânia Neris/UFSCar

Sidney Fels/UBC **http://www.lia.dc.ufscar.br/UNITY**

Junia Anacleto/UFSCar

Daniel Lucrédio/UFSCar

Fernando Balbino/UniLins

Helio Guardia/UFSCar

Silvia Tejo/Lins' Hospital

Microsoft Research
FacultySummit