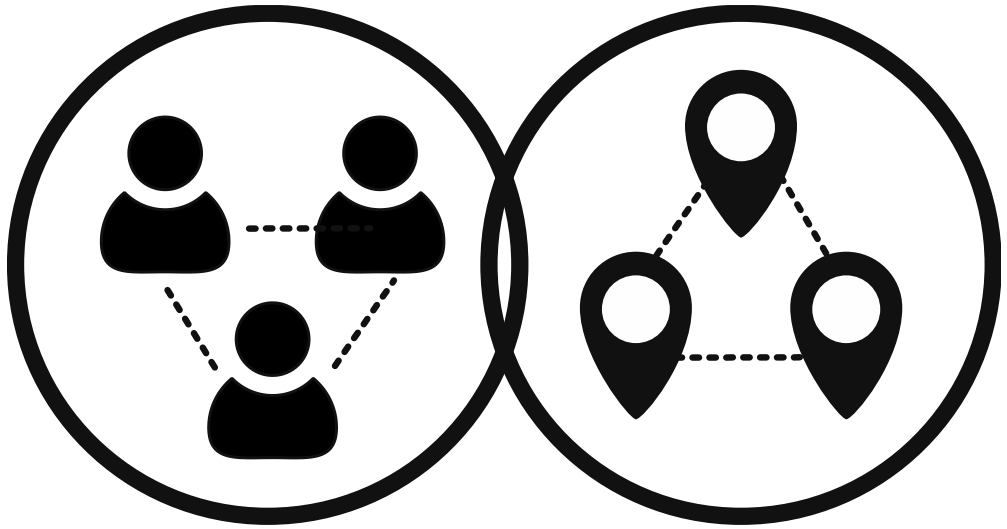


Social & Mobile Computing

Lecture – Week 1
Course Introduction & Content Overview

Ben Matthews (Course Coordinator)

Acknowledgement of Country

Bidjara country (Augathella, QLD)

We are…

Course Coordinator & Lecturer

Ben Matthews

78-307

deco3500@uq.edu.au

Teaching team:
Yves Yang
Rosti Gusev
Elias Blanch
Jim Chi

You..?

A brief history of interaction with computers

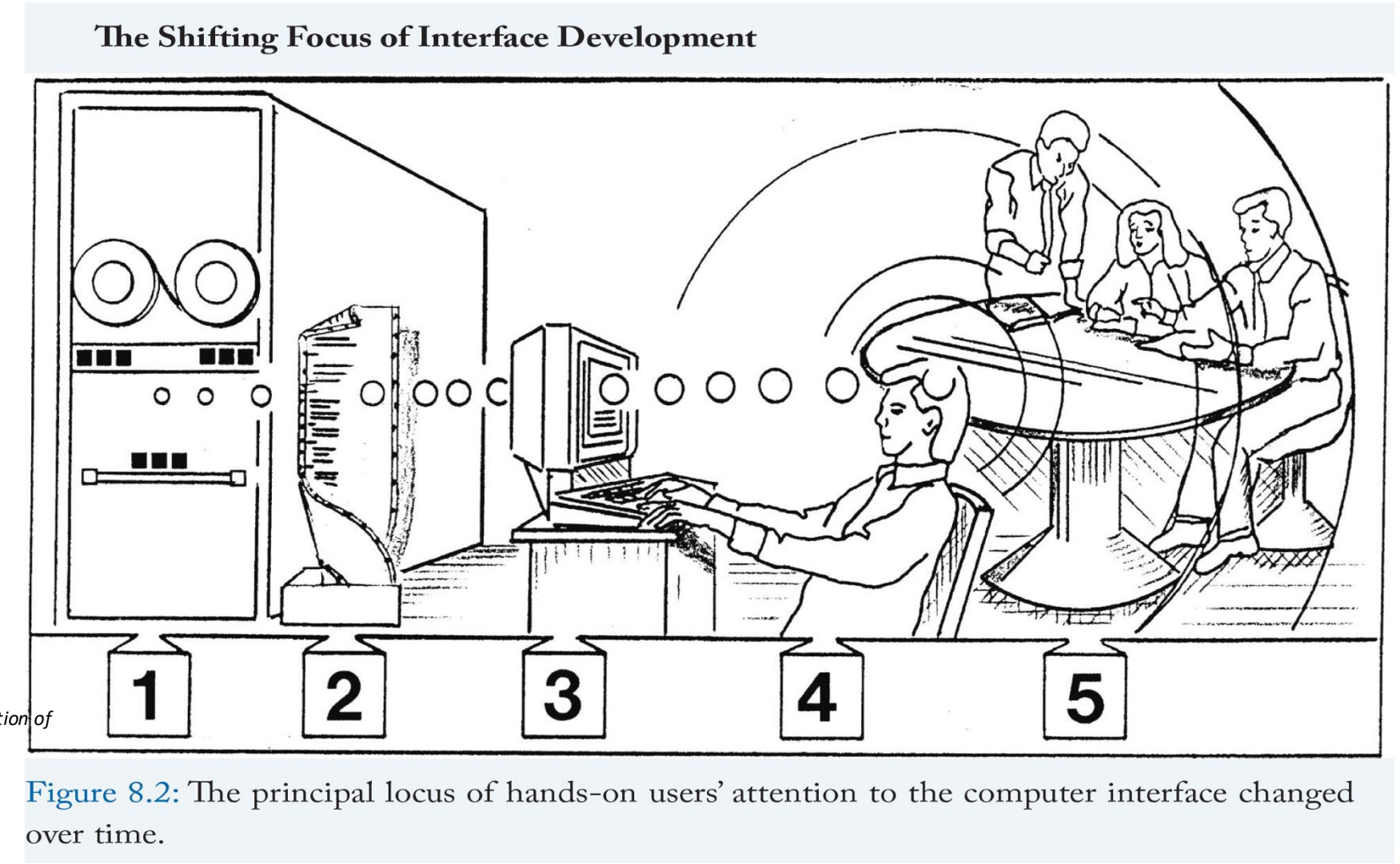
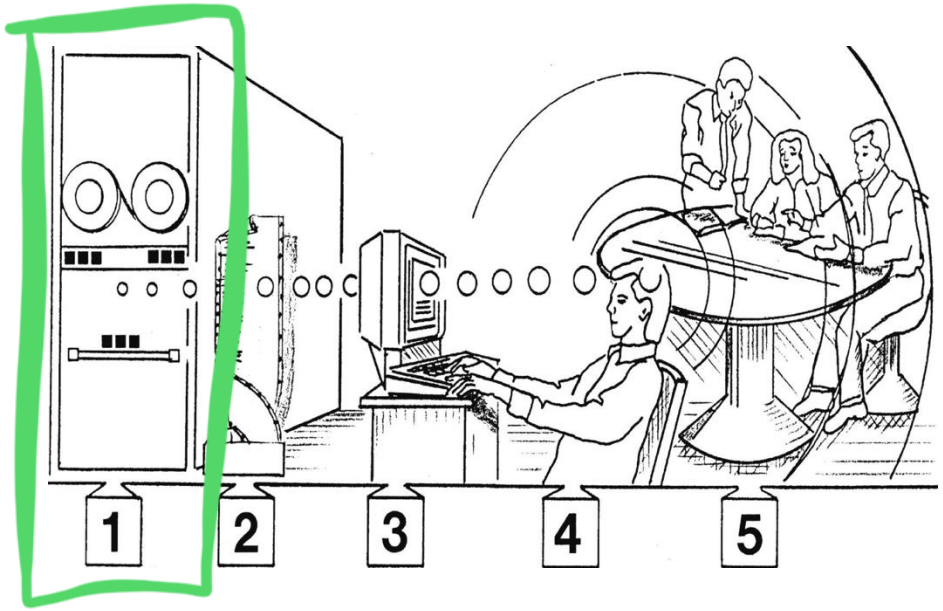
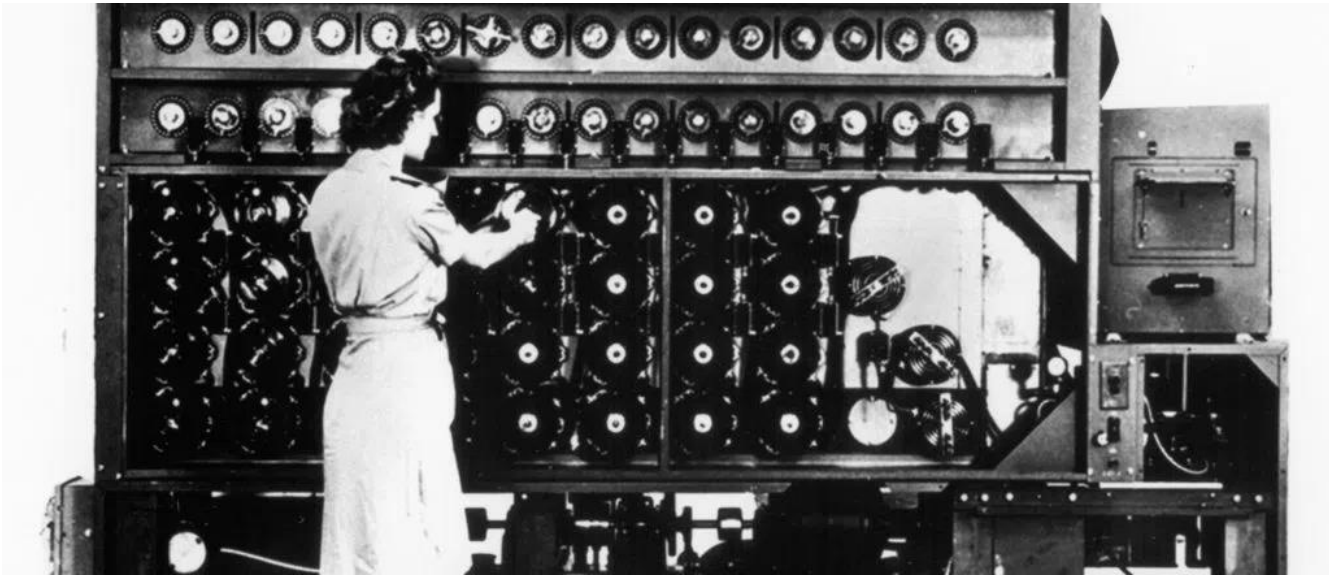


Figure 8.2: The principal locus of hands-on users' attention to the computer interface changed over time.

Grudin, J. (2017) *From tool to partner: the evolution of Human-Computer Interaction.* Morgan Claypool.

Interaction at the physical hardware



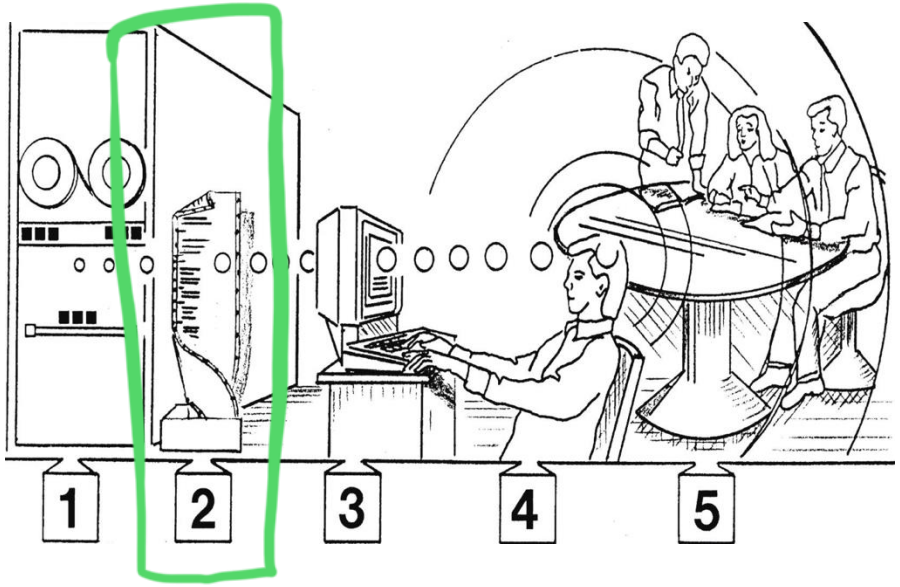


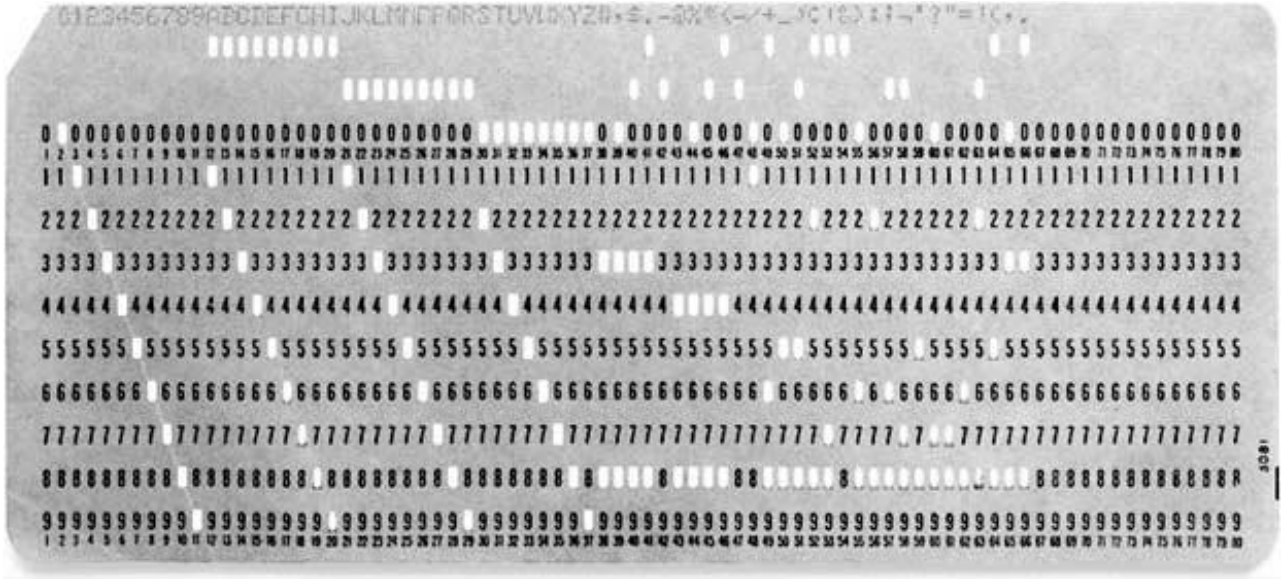
The only users were hardware engineers (by necessity)

Reprogramming required physical reconfiguration: cables, setting switches, loading tapes etc.

https://www.information-age.com/playing-imitation-game-how-turings-lessons-can-apply-cybersecurity-123460136/

Interaction at the Software Level





Users could now learn computer ‘languages’

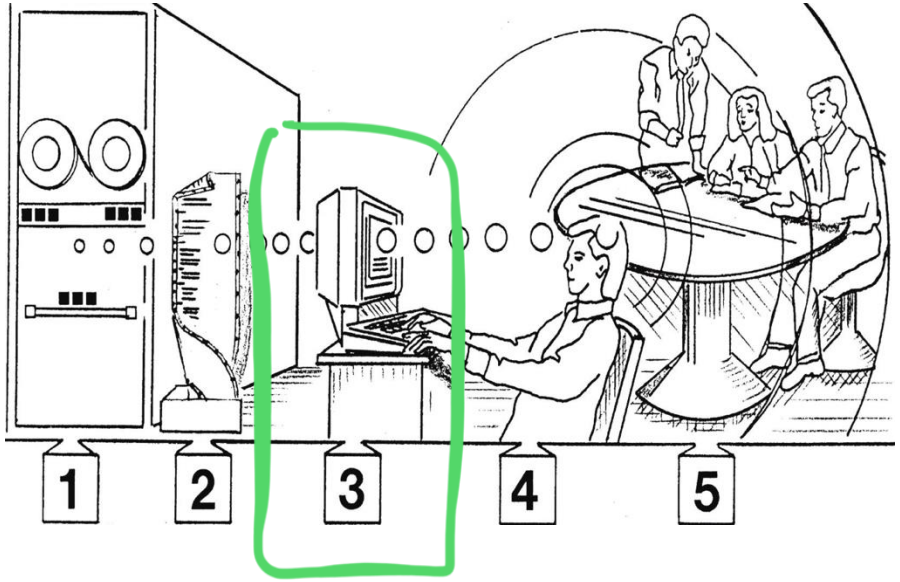
Computers could run programs without physical reconfiguration

Software engineering became distinct from hardware engineering

Programs were only ‘machine readable’; no semantic code

https://www.ibm.com/ibm/history/ibm100/us/en/icons/punchcard/transform/

Interaction at the Terminal (display + keyboard)

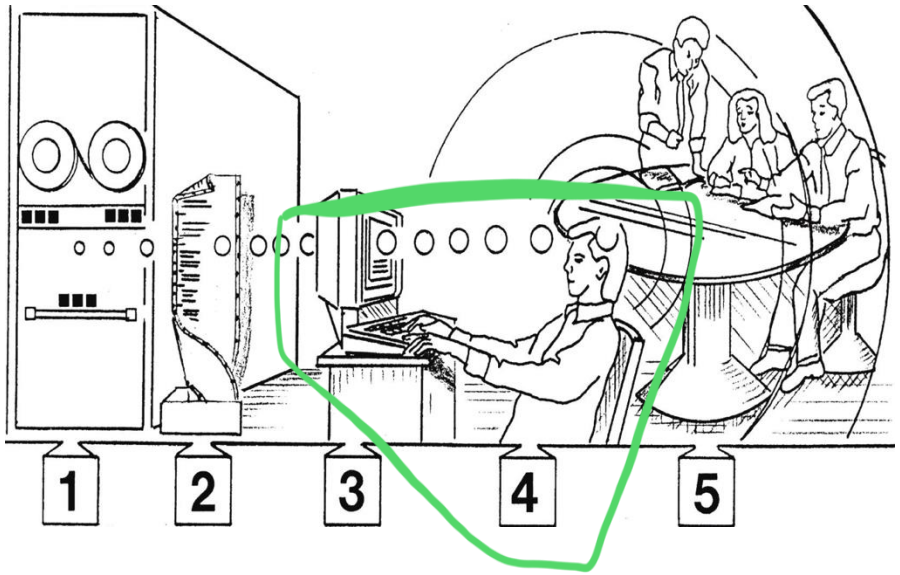


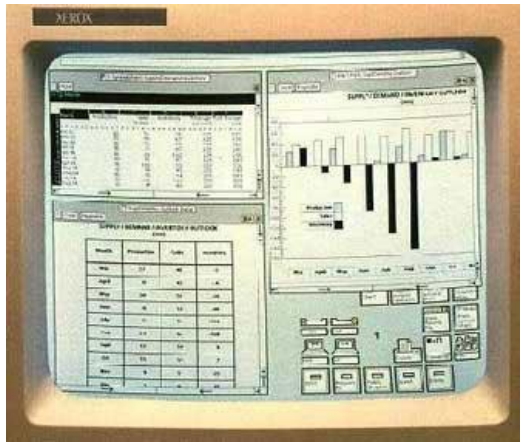
Human-readable code

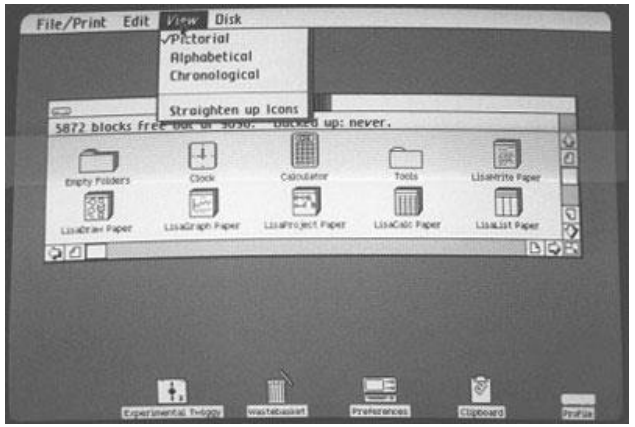
‘Semantic’ commands: LIST, PRINT, DELETE etc.

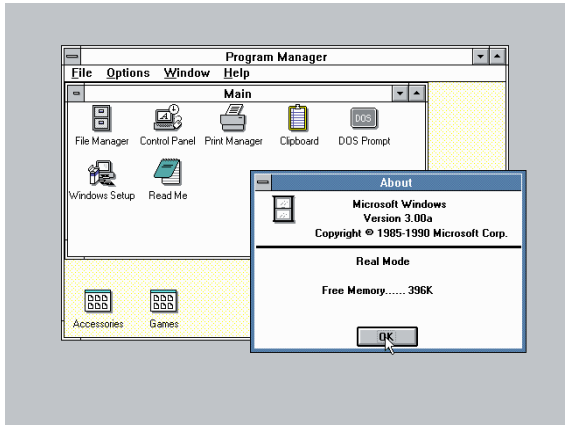
https://www.hanselman.com/blog/whats-the-difference-between-a-console-a-terminal-and-a-shell

Interaction at the GUI (graphical user interface)



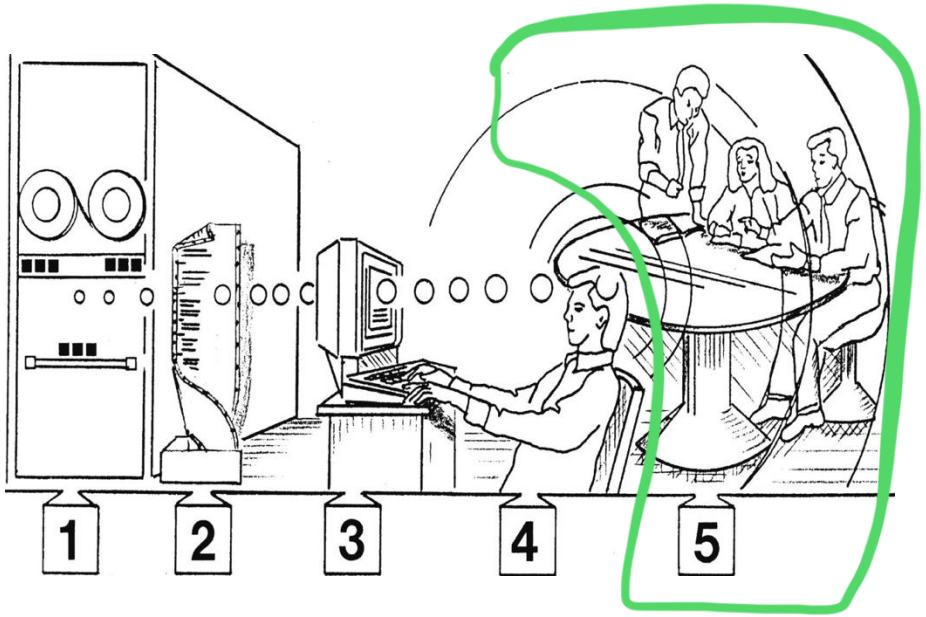






arstechnica.com/features/2005/05/gui/

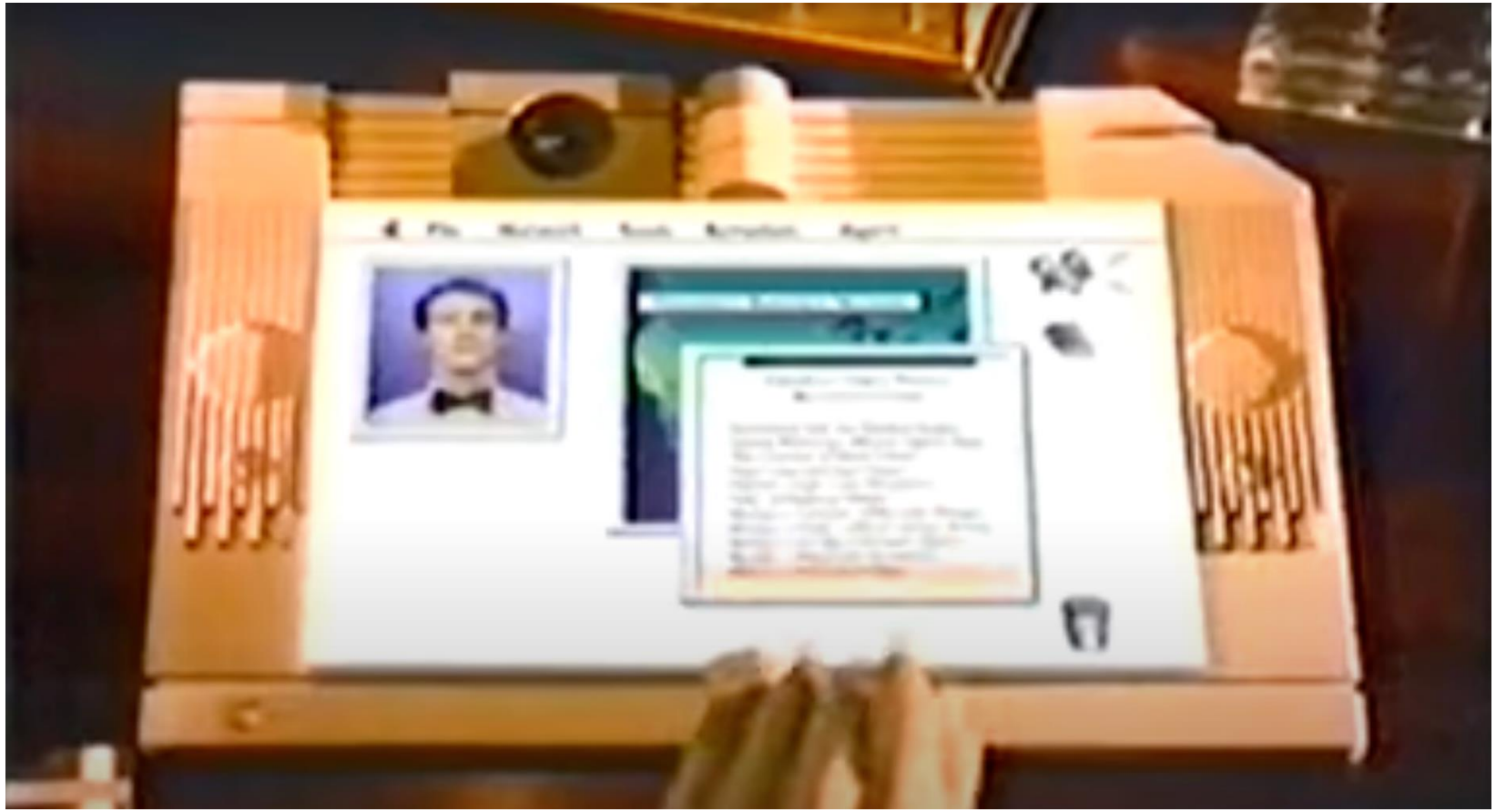
Interaction in the social environment (ubiquitous computing)



Anywhere, everywhere, “groupware”, internet-of-things (IOT), social groups, teams, embedded environments…

The “disappearing” interface

The year was 1987 (predicting the year 2010)



https://www.youtube.com/watch?v=umJsITGzXd0

So what?

Technological change radically alters what, and how, we design for people, and problematises the idea of ‘interface’

We can no longer make easy assumptions about the environments or social settings in which our systems will be used (at work, in an office, in transit, at home, with family, alone, etc.)

Context: social, physical, institutional, national, environmental, legal, audio, ambient, haptic—these (sometimes unpredictable) aspects of use make design challenging

The Augurscope: a mixed reality interface for outdoors (2002)

“We named our device an ‘augurscope’ because it augments both reality and virtuality and also because one of its potential uses is to peer into the future (‘auguring’). “

Holger Schnädelbach, Boriana Koleva, Martin Flintham, Mike Fraser, Shahram Izadi, Paul Chandler, Malcolm Foster, Steve Benford, Chris Greenhalgh, and Tom Rodden. 2002. The augurscope: a mixed reality interface for outdoors. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '02). ACM, New York, NY, USA, 9-16. DOI=http://dx.doi.org/10.1145/503376.503379
http://www.cs.nott.ac.uk/~pszhms/pdfs/Schnadelbach_Augurscope.pdf

Pokemon GO 2016

Video/Image Filters

Microsoft Hololens

Google Glass 2013 - 2015

Learning Objectives

Put simply

Identify and appreciate the people-centred issues underlying the design of successful technologies in social and mobile settings.

Apply lessons learned from theory and practical experience to the design and prototyping of social and mobile applications.

Analyse the social implications of design decisions on people's experiences with each other through and around technology.

Organise and carry out a human-centred design process for social and mobile contexts of use.

Produce justified, critical solutions to design problems appropriate for the problem context.

Be an effective team member, while managing your own work.

Effectively communicate your designs, design decisions to various people in various people.

(#ReadTheECP for full details)

Course Structure

Contact (1 x 3 hrs Tuesday; 1 x 2hrs Wednesday)

Lecture content, theory, case studies, discussion activities

Critiques, design activities, team progress reports

In-person only

Course Resources

Prerequisities – DECO2500/7250 and CSSE1001/7030

Texts & readings

No set text but readings will be posted/linked on **Blackboard**

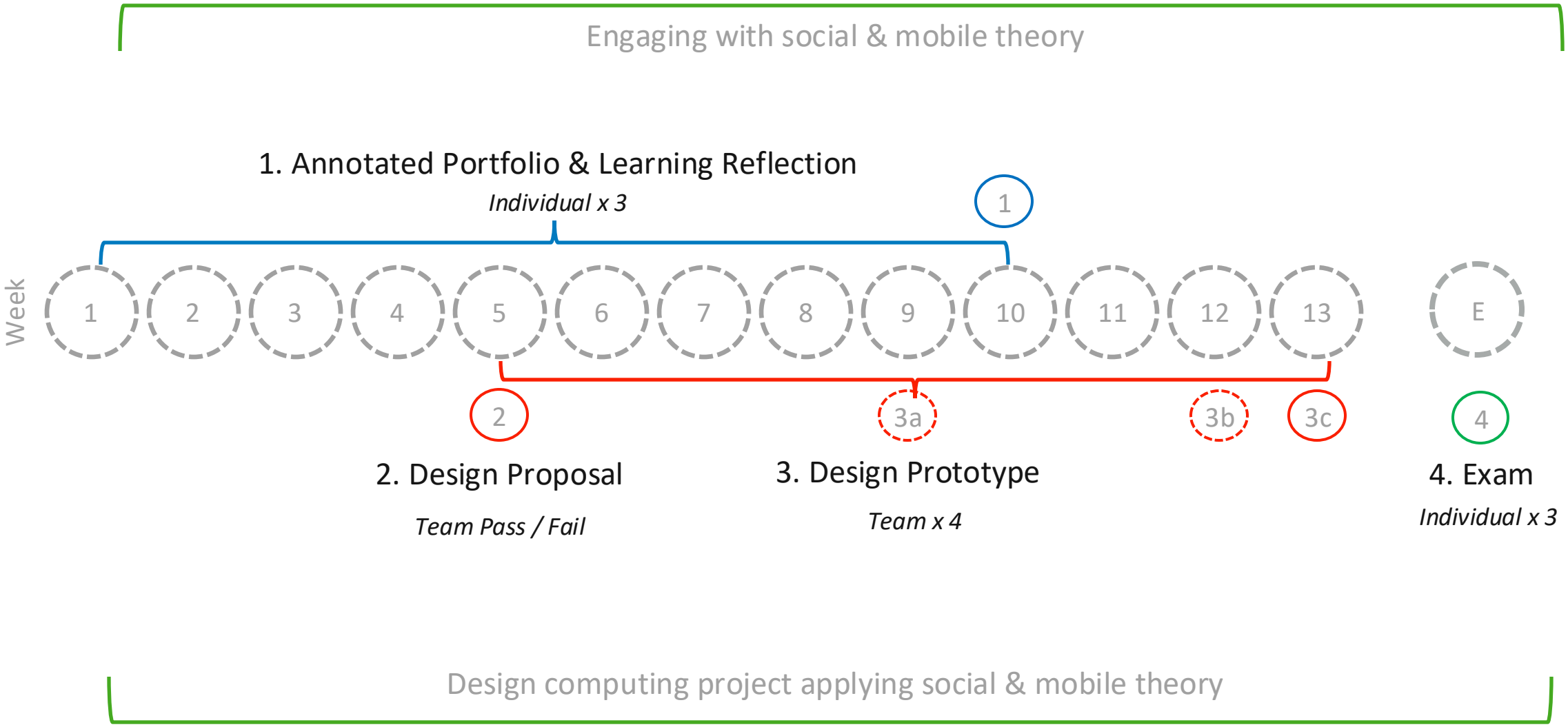
Assessment task sheets, criteria & grades on **Blackboard**

Communication

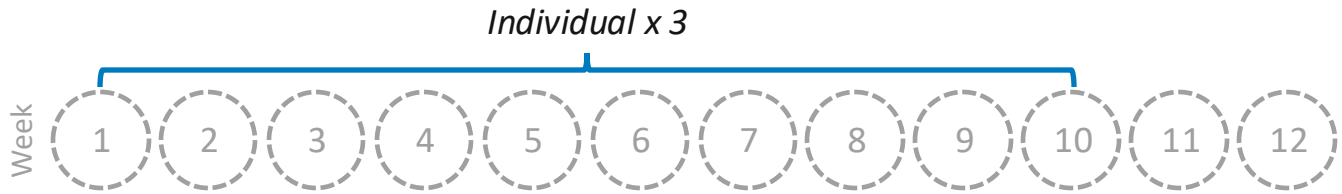
Ed Discussion (on **Blackboard**) for course discussion/questions

Email for anything personal (deco3500@uq.edu.au)

Assessment Overview



1. Annotated Portfolio & Learning Reflection



Due in Week 10

Individual activity tasks throughout the course (ongoing, weekly)

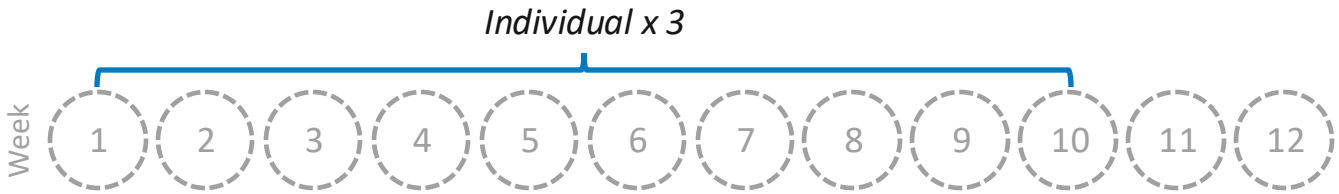
Tasks assigned in studios (often to be completed in studio)

Official list of tasks maintained on Ed Discussion

Keep a portfolio of your completed tasks, with annotations of what you learn

Recommend you use something like Miro or Powerpoint/Keynote as a visual record of work that can easily be annotated

1. Annotated Portfolio & Learning Reflection



Grading:

Half of your grade will be via a grading contract:

- How many of the tasks did you complete with functional annotations?
- (ALL = High Distinction; >85% = Distinction; >70% = Credit; >50% = Pass)

The other half will be graded on your 1000-word learning reflection

- Use your annotations as evidence of what you learned
- Demonstrate you meet the learning goals of the assessment by showing how you would apply that understanding to other projects or arenas of practice

2. Design Proposal (Week 5)

Team-based (4 – 5 people)

PASS / FAIL

Define project & introduce team

Describe concept & build on research conducted to this point

Deliver: presentation of concept in Week 5

3. Design Prototype (Weeks 9, 12 & 13)

Team-based

Develop prototype/s to demonstrate your proposed social/mobile concept

Prototypes should aim to better understand the problem space

Delivery:

- Stand-up reporting on progress in Week 9
- Tradeshow in Week 12
- Documentation, prototype & promo material in Week 13

4. End of semester exam

Individual, secure assessment (new UQ policy)

Weighting x 3

Lectures, theory, readings, studio tasks, annotated portfolio tasks etc. may become questions on the exam.

Expect ~50% multiple choice questions, 50% short answer or design questions

There will be an exam preparation Q&A in our Tuesday studio, Week 13

Example questions will be provided

Pass Hurdles

Individual	Teamwork
At least passing grade on	At least passing grade
4: Exam	Combination of team assessments 2: Design Proposal & 3: Design Prototype

Must meet both to pass the course

Qualitative Grading

Work will be awarded a grade not a mark

Identify standard of work using UQ grades

Fail, Pass, Credit, Distinction, High Distinction

Final Grading for the course

Average according to weighting across graded items - same formula as for GPA calculation

Outlined in ECP

7	**High Distinction.** Demonstrated evidence of **exceptional** achievement of course learning outcomes.
6	**Distinction.** Demonstrated evidence of **advanced** achievement of course learning outcomes.
5	**Credit.** Demonstrated evidence of **proficient** achievement of course learning outcomes.
4	**Pass.** Demonstrated evidence of **functional** achievement of course learning outcomes.
3	**Marginal Fail.** Demonstrated evidence of **developing** achievement of course learning outcomes.
2	**Fail.** **Minimal** evidence of achievement of course learning outcomes.
1	**Low Fail.** **Absence** of evidence of achievement of course learning outcomes.

Team-based Assessment

Team grading

Everyone in the team gets the same grade for team assessment

Teams to consider conflict resolution strategies at formation

Process for dealing with conflict as it arises

- Email teaching staff to inform them of conflict & plans for rectifying
- Check-in process & mediation if needed
- If all attempts at resolving conflict fail, Course Coordinator can adjust individual grades.

Late submission of assessment

Always submit whatever you have by the deadline!

(even if you have applied for an extension)

Submit late without approval? (please don’t)

Check the ECP for penalties—UQ has strict policies around late submission, extension requests etc. which are different for different types of assessment.

Feedback in the Course

Feedback to you

Variety of sources: teaching staff, peers, visitors

Variety of means: verbally & written

Content & tones may vary: formal, informal, different sources, time to reflect, question rather than statement

Unsure? Ask, clarify, query differences.

Aim is to improve your work, it all comes from a good place.

Feedback to us

Any time – email or face-to-face!

Anonymous posts on Ed Discussion

Not comfortable coming to us?

Ask a friend to on your behalf or go via the Director Teaching & Learning or School Office.

Post-mortem at end of semester

SeCATs

Course Expectations & Perceptions

1. What does “Social & Mobile Computing” mean to you?

Course Expectations & Perceptions

2. What is one thing you're excited about in regard to the course content or activities?

Course Expectations & Perceptions

3. What is one thing you're worried about in regard to the course content or assessment?

Course Expectations & Perceptions

4. What knowledge or skills are you hoping to build or add to your repertoire in this course?

30 mins

Getting to know each other…

Introduction using Aboriginal Terms of Reference (ATR).

Centres human relationships: who we are, not what we do.

A note: You might not want to share some of these answers, or some questions may be confronting. That is ok! Only respond to what you are comfortable with sharing with your peers.

30 mins

Getting to know each other…

Take a minute or so to introduce yourself

Questions to guide your introduction:

State your name

Where were your parents born? Do you know where your ancestors are from?

Where were you born and grew up? Do you have any siblings?

Are you single, in a relationship, married, children?

How many languages do you speak?

Name the Traditional Owners where you grew up or where you live right now. What happened to them?

Where do you feel your place or ‘home’ is in this land?

Preparing for your team project

Identify a domain

(what's a domain?)

Identify implications for design

(Review & critique literature)

Identify opportunities for social/mobile computing

(what's social/mobile?)

What's a Domain?

Areas of human activity or expertise

Think in terms of human tasks, situations, relations

Professional, amateur, leisure, domestic, community…

Broad domains can be identified in terms of social groups/labels:

tenant, parent, nurse, cyclist, cross-stitcher, barista, [noun]-connoisseur, gamer, [noun]- enthusiast, commuter, homeless, refugee, patient, carer, administrator, workaholic, shopaholic, sleepwalker, gym rat, vegetarian...

What's a Domain?

Can be social issues

- Language barrier
  - Learning a new language
  - Living/travelling in a new country
- Environmentalism
  - Reducing disposable plastic
  - Product packaging
  - Effect of eating habits
  - Waste sorting
  - What can little old me do?
- Food lifestyle
  - Foodies, vegans (choice related)
  - Understanding nutrition
- Difficulties of self-directed study
- Crime rates (areas, reporting)
- Fake news & deep fakes
  - Recognising & flagging
- Negotiating different personalities/personal values
  - Social awkwardness
- Farming
  - Drought awareness
  - What it is to farm (awareness from non-farmers)
  - Supporting agriculture
  - Supporting remote farming communities
- News that is GOOD
- Impact of social media
  - Influencer culture
  - Removing likes from Insta
  - Visibility & persistence of data
- Toxicity in gaming
  - All the "-ists"
- Equality
- Universal Design (accessibility, design for all)
- Smart Phone "Freak"
  - Impact of usage on relationships & day-to-day life
- Mental Health
- Volunteering
- Immigration & refugees
- Financial Dynamics
  - Poverty & near poverty
- Protesting & Activism
- Understanding an issue
  - Multiple Perspectives
- Privacy
  - Implications of facial recognition
  - VPN's, TOR

5 mins

Exploring Domains

On your own:

Write down at least four of the communities, “types”, or social groups you identify as being a part of (e.g. cyclist, environmentalist, youth group, karate black belt, guitarist, Broncos fan, MMORPGamer, software engineer, coffee connoisseur, cat lover, fitness freak, avid baker etc.).

These can be general, or specific, formal or informal, a label you give yourself.

For each group:

- What makes a person a member of that group? Is it obvious to others?
- What rules/behaviours/structures exist for each group (within and without)?
- What rules/mechanisms are used to manage that group?
- What can & can’t you do as a member of the group?

10 mins

Exploring Domains - Groups

At your table:

Share **two** groups you are comfortable sharing (and the characteristics of that group)

Across the table:

- Are there any groups you share?
- Do you each have the same experience of the group?
- What is common across different groups?
- What is “difficult” in the groups mentioned?

List these groups & social characteristics on the table whiteboard or butcher’s paper

Mix-up Tables!!!

2 people stay

2 people move to the closest table

2 people move to the furthest (or a faraway) table with space for two

15 mins

Exploring Domains - Issues

If you could put all the brain-power in this room to exploring an issue, what would that be?

Think micro as well as macro

Think local as well as global

List these issues on the table whiteboard or butcher's paper

(Maybe it's connected to a group/label you talked about previously)

Issue is not the same as problem

Not necessarily something wrong but could be an interesting space/opportunity

Mix-up Tables!!!

2 people stay

2 people move to the closest table

2 people move to the furthest (or a faraway) table with space for two

10 mins

Exploring Domains - People

Looking at the **issues** generated…

List these at your tables, connecting them to the issues they related to.

- How do these relate to participant groups?
- Who are the people involved? Are there specific user groups affected?
- What are the human values to be explored?

First portfolio task

Read Mark Weiser's 1990 vision of *'ubiquitous computing'*

https://doi.org/10.1145/329124.329126 (from a UQ network)
or
https://search.library.uq.edu.au/permalink/61UQ_INST/c60qab/cdi_proquest_miscellaneous_1671311929

(you'll need to log in to the library to access from home)

SIX ANNOTATIONS:

- Identify **three** examples of things that are now commercial products, and name the products
- Identify **three** examples of things that are unrealistic, obsolete, outdated, or didn't happen the way they are described

First portfolio task

Sal awakens; she smells coffee. A few minutes ago her alarm clock, alerted by her restless rolling before waking, had quietly asked, "Coffee ?" and she had mumbled, "Yes." "Yes" and "no" are the only words it knows. Sal looks out her windows at her neighborhood. Sunlight and a fence are visible through one, and through others she sees electronic trails that have been kept for her of neighbors coming and going during the early morning. Privacy conventions and practical data rates prevent displaying video footage, but time markers and electronic tracks on the neighborhood map let Sal feel cozy in her street.

Existing products

Eight Sleep is a smart mattress that can be programmed to start a coffee machine when it detects you are waking up

Sleep Sense (Samsung) can connect to coffee makers to start brewing as you wake up

Inaccurate

Smart assistants (Siri, Alexa etc.) can recognise a lot more than yes and no

This week, to do…

Set up a Miro account

You'll need to be logged in for us to see your name in Miro activities.

miro.com/signup