lec 2

Not included Connection

Mobile Computing system → easily moved Physically using its Computing Cababilites while moving

↓

Calculators, laptop, Mobile

PDA → personal digital assistants

Mobile Computing system acts as → Stationary Computing System

Mobility includes moving Between → geographical locations
applications ← → networks

Advantages → small size , power source , mobility

Mobile Computing → mobile user + mobile devices
mobile Network + mobile app

Dimension of Mobility → tools that allow us to qualify our problem of building mobile SW application , mobile Computed system

- are not Completly orthogonal with respect to each other
- Some are limitations

Mesh Connected

- large varity of platforms
- limited power supply
- location awarness
- wireless Connectivity
- limited device Cababilities
- Active Behaviour
- Multimodal and variant UIs

Mobile or Stationary ?

① Mobile Condition ⟶ (users)
↳ set of properties that distinguish the mobile user from a typical, Stationary Computing System

② Dimension of mobility ⟶ (app)
Set of properties that distinguish mobile system from Stationary System

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* Conditions of mobile user

① location awarness (Challenge, opportunity)
↳ acquiring position info. require Connectivity.

a) localization ⟶ ability of mobile app to accomodate logic that allows the selection of diff bussiness logic, work Flow according to location info

b) location Sensitivity ⟶ ability of sw app to obtain location info while being used and then to take advantage of this location depending Features

Location awarness ⟶ wirless Communication system
- triangulation
- proximity
- Scene Analysis

Network operator → we Vodafone orange

Quality of Service QoS "Communication Quality"

moving from one place to another → disconnect time from network

network Connectivity } → imp to design mobile app

QoS → affect QoS

includes
- Available bandwidth
- probability of Connectivity
- Statistical traffic measurment

APP → how to stop working when disconnect, resume when Connect

must adapt their features and functionality to available bw

limited device Storage and CPU

Size / portability Size / Performance

Small device → portability ↑ performance ↓
physical

- limited power supply
- platforms → multithreading / multiprocessing

User interface

Stationary application have more efficient UI than mobile
- multi channel → touch, voice

Platform proliferation

UML design → develop on different platforms

Transactions

- Passive → Stationary → Created by user
- Active → Mobile → Created by system
  - synchronus → system
  - asynchronus → user respond

Architecture of Mobile Software app