

Issues :

- Actor - Network Theory
 - » Some basic concepts
 - » Examples
 - » Some common misunderstandings

Background literature:

- » Monteiro: Monsters, From systems to actor-networks .
- » In braa et al (eds) Planet Internet , stud. litteratur 2000
- » Hanseth:<http://heim.ifi.uio.no/~oleha/Publications/bok.html>

Introduction - different view on the role of technology in society

Teknological determinism

or

Social construction of technology ,

Neither of these have been found adequate



Actør network "theories"

ANT- history and background (Hetland, Monteiro)

- Sociological studies of TD
- Historical studies of TD
- Communication theoretical studies of TD
- Development of knowledge
- Teknologiskal paradigmes
- Theory of science
 - » Sannhet, falsifikasjon , normativt
 - » ..
- Vitenskapssosiologi
 - » Kuhn, Noble, Braverman
- Science and technology studies
 - Communities in Norwayr i Norge
 - :TMV& ESST-→TI, STS,.
- ANT
 - » :Latour, Law, Callon, Akrich
 - » "**ANT**" - more schools

ANT as response a simplistic view on technological development

- TD does not follow a linear trajectory
 - » Many and often antagonistic forces 'drives' the the development
- Technology is not only black boxes
 - » A need to 'open the "boxes, to understand each specific technology and technical artifacts and their interrelation to its environment
 - » Necessary to take technology seriously - as actors or 'actants'

Some basic concepts

- Networks and actants
- of what?
- Enrollments
- Translations
- Inscriptions - who , what , how and the strength
- Alignments
- Flexible interpretations
- Stabilization
- Irreversibility

Installed base in an ANT perspective

- An installed base (IB) in a heterogeneous network of technologies/technical artifacts and humans that is aligned
 - » This network (IB) Is not static, but is continuously shaped and reshaped through various processes of translations - through the current use of the artifacts - also called *drifting*
 - » An IB may also be changes through integration of new technology (e.g. IP/TCP and WWW)
 - » A transition from one standard to another Is not only a question of interoperability, but also of human interpretation
 - » A technology is not inherently constraining or enabling, it makes only sense in a context of heterogeneous networks.

Information Infrastructure and ANT

- Installed base hampers organizational change
 - » Irreversibility of aligned networks
- Installed base makes huge transitions very difficult
- The management of (large) IS or II
 - » No single actor is (human or non-human) is in control
 - » Difficult to predict outcome of implementation of IT in organizations



- » Strategic alignment is difficult

From systems to actor-networks 1

- Focus on goals instead of means
- The context is the surrounding actor-network
- Artifacts do not exist in a vacuum, but are connected; they belong to an encompassing actor-network
- Unpack complexity by zooming in - or collapse by zooming out
- Any analysis needs to delimit the foreground phenomena from the background- but ANT cannot help doing that
- The basic for interpreting a process is the tracing over time of different translations that go into different inscriptions

From systems to actor-networks 2

- Focus on 4 aspects of inscriptions:
 - » i) what is the aim
 - » ii) who inscribes
 - » iii) into what material is the inscription made
 - » iv) how strong is the inscription
- Stability is a measure of the degree of alignment
- For technology, every day is a working day
- Irreversibility is a measure of
 - » i) how difficult it is to undo decisions
 - » ii) the extent to which these determine subsequent ones

The case of EDI in health care in Norway

Fürst medical laboratory

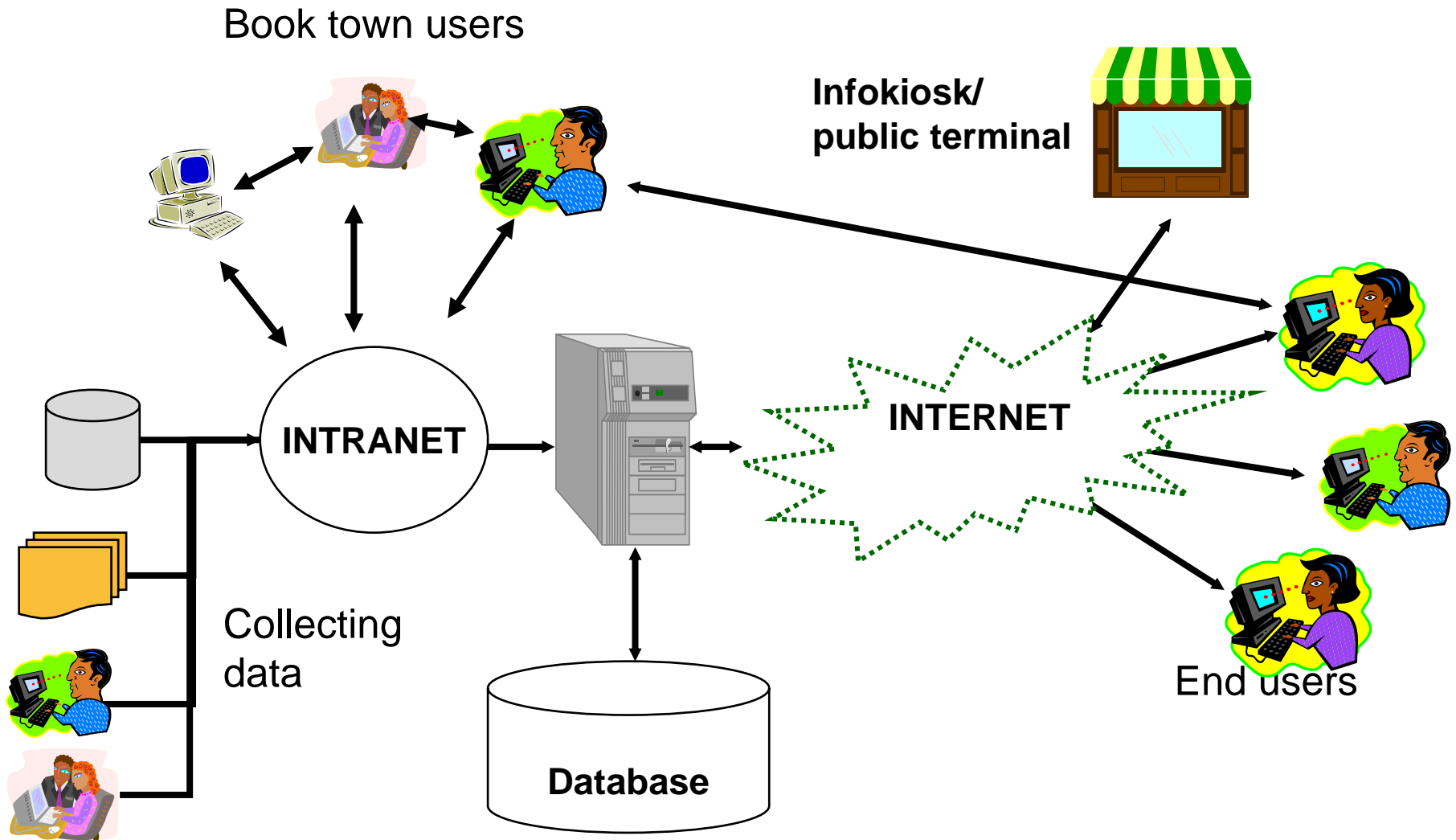
- The solution as a sequence of translations of interest and existing solutions
- The integration of electronic journal and lab. reports
- Provide modems for free
- Integration with routines at the doctors office
- Enroll new user - the network grows
 - » Critical size of installed base : lock-in

The Booktown Network

Cultivation of a virtual community network

- A book town is a small rural town or village in which second-hand and antiquarian bookshops are concentrated. The bookshops are often complemented by artisanal enterprises such as paper production, calligraphy, printing, book design, book illustration and traditional bookbinding, as well as other crafts which are not related to books.
- The aim of the project was to create a network of bookshops and other parties

The Book Town network as a social-technical construction



The development process in an ANT perspective

- Translations and inscriptions
 - » of the visions/ideas into the organisation structure
 - » of the user needs/interest into the technical solutions
 - user needs analysis
 - prototyping
- Alignment occurred through a series of translations and inscriptions into a commonly agreed upon platform for the collaborative effort
 - » Time and resource constraints
- Enrolment of different user groups and interests through the development processes

Different interests and ambitions

Two alternative ambition levels

- To develop a traditional information system, supporting limited user communications
- To develop an advanced technical platform E-commerce platform supporting business interactions

The alignment processes for the E-commerce platform failed and alternative solutions materialised

Enrollment strategies

- In project development process
 - » Local enrollment
 - » Representativity
 - » Enroll your allied or those making "noice" if not participants
- In network development process
 - » Local strategies for including new members in the network
 - » Exclusive strategy: only the project partners were included
 - » Inclusive strategy: All booksellers were offered access to the network and services

Conclusions

- It was possible to establish a network (virtual organisation) spanning regions (space), time and cultural differences and difficulties along the way
- The technical and organisational infrastructures are intertwined
- Takes long time to compromise - align
 - » Cultivation and improvisation
 - » Were they really aligned?

ANT is a suitable framework: useful as it can help to capture the richness and variety across actors and interests

Problems – misunderstanding

- What (who) is the actants
 - » Symmetric: human and non-human actors
 - » Who interprets the actants
 - Do artifacts have intention?
 - Good and bad actacts - where is the politics and the ethics?
- What is the network
 - » What is inside and what is outside the network
- What is ANT
 - » A theory
 - » A methodology?
 - » A perspective ?
 - » A vocabolar