Velkommen til Gruppetime 3

IN2150

Hovedtemaer for i dag

- Spørsmål til obligen
- Sentrale begreper for denne uken
- Gå gjennom reading guidelines for lecture 3



Assignment 1

Oppgaven skal man komme fra et brukerperspektiv. Beskriv hvordan en bestemt bruker forholder seg til IT-systemer for å løse sine arbeidsoppgaver.

Dette kan omfatte:

- Hvilke verktøy brukes (IT, men også papir, telefon m.m.) for å løse hvilke oppgaver?
- Hvordan brukes verktøyene? Samles det først og fremst informasjon for primær bruk (knyttettil å løse arbeidsoppgavene) eller også for sekundær bruk av informasjonen (for eksempel for å administrere arbeidet, eller samle data for forskning/analyse)?
- I hvilken grad utføres arbeidet sammen med andre (kollektivt)?
- Hvordan er denne brukerens arbeid koordinert med andres arbeid? Hvilken rolle spiller IT for denne koordineringen?
- Innlevering 01.03

Spørsmål og Info

- Les reading guidelines når dere skal forstå tekstene
- Håper alle har fått en gruppe nå har fått snakket med dem.
- Har ikke fått lagt ut slides enda noe rart med siden så jeg har

Forrige uke recap :) Snakk sammen i 3 min

- How do [the authors] define installed base?
- Why do [the authors] argue for reconceptualizing design? What do they mean?
- What does ‘cultivation of the installed base’ mean? How is it different from construction?

How do [the authors] define installed base?

- Sociotechnical installed base: users, practices, organizational arrangements, technology
- The installed base serves as the foundation for any change and development, and can be both enabling and constraining. New developments need to fit and make use of existing arrangements and at the same time transform them. p.4

Why do [the authors] argue for reconceptualizing design? What do they mean?

- They argue for a re-conceptualization of the very notion of design of information infrastructure.
- Rather than design in the conventional sense, design should be about an evolution of infrastructure,
  - A change in design strategy
  - To a strategy that intervene and influence ongoing processes
  - “cultivation of the installed base” – a strategy that starts from what already exists (the installed base).

What does ‘cultivation of the installed base’ mean? How is it different from construction?

En metafor

Se hvordan “systemet” responderer til en innblanding (intervention)



En endringsstrategi som “anerkjenner” den installerte basen. Adresserer endring inkrementelt og over tid

“Cultivation entails a natural process that demands support and monitoring activities that are directed toward a material that is itself dynamic and posses its own logic of growth – the installed base.”

Construction

Cultivation

- Pågående tilpasninger
- Intervensjon-aktiviteter
- Kan være mer bottom up

Construction

- Detaljert planlegging
- Mye kontroll
- Top-down

Endringsstrategier: Evolusjonær vs drastisk

Evolusjonære strategier

- Endringer over tid
- Inkrementelt
- Ta for seg en og en funksjon eller systemer for system

Drastiske endringer

- En “over-natten-strategi”
- Alt gjøres samtidig
- Funksjonaliteten blir byttet ut som en totalitet



Original 2008



2018 bygget på en eksisterende modell



2024 helt elektrisk ny logo og ny plattform

Cultivation



To observe how the ‘system’ responds to an intervention “to foster the growth of vegetables”

Rip and replace



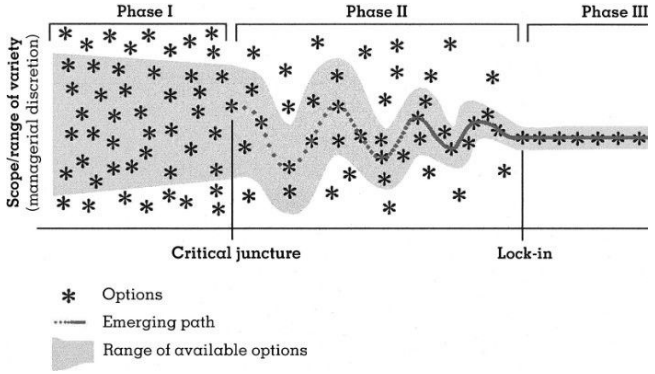
Fjerner det gamle og setter på noe nytt

Path-dependency

Som vi vet utgjør den installerte basen det allerede eksisterende: mennesker, systemer, strategier, valg, lovverk etc.

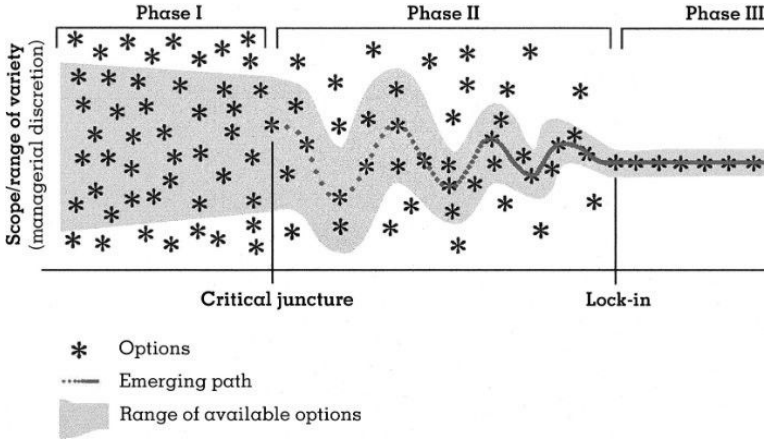
En II evolverer med utgangspunkt i den installerte basen. Det er denne som setter føringer for retningen/mulighetene for fremtidig endring.

Disse heterogene komponentene vil dermed både utgjøre mulighetsrommet, og sette begrensninger, for hvordan infrastrukturen evolverer. Vi sier derfor at en II er path dependent.



Lock-ins

Begrensningene den installerte basen setter for fremtidige endringer i infrastrukturen kan føre til **lock-ins.**



Denne uken

Gasser, L. (1986). “The integration of computing and routine work”. ACM Transactions on Information Systems (TOIS), 4(3), pp. 205-225.

- Hvordan folk forholder seg til teknologi som ikke fungerer i praksis.

Grisot, M. (2010). «Ordningslogikker i informasjonspraksiser - en case fra hjertetransplantasjon»

- Tatt fra en bok om samarbeid i helsesystemet og komplekse prosesser.

Hanseth, O., & Lundberg, N. (2001). Designing work-oriented infrastructures. Computer Supported Cooperative Work (CSCW), 10(3-4), 347-372.

- Arbeid og informasjonsinfrastrukturer.

Gasser, L. (1986). “The integration of computing and routine work”. ACM Transactions on Information Systems

Diskusjonsspørsmål (10min)

- What does [the author] mean with the expression that systems are “integrated” into work?
- How does [the author] describe the concept of task chain, production lattice, and work situation?
- What is the use of these concepts? What do they help us understand?

What does [the author] mean with the expression that systems are “integrated” into work?

- We begin to build a picture of computing integrated into work through the complex, coordinated action of people and groups in different work settings accommodating to the varying misfit of computing as the contingencies of their daily work evolve. This leads us to the insight that the ease or difficulty of integrating computing into work depends on the ease or difficulty of accommodating the misfits and taking up the slack between computing and the demands of particular work contingencies. This in turn is shaped by the coordination of work across work situations of varying character.

How does [the author] describe the concept of task chain, production lattice, and work situation? Hva er bruken av disse konseptene? Hva hjelper de oss å forstå?

For å forstå dette må vi gå litt mer i dybden på de tre forskjellige

- Task chain
- Production lattice
- Work situation

Hva er arbeid?

Task (oppgave)

Komplekse organisasjoner består av et sammenvevd nettverk av oppgaver.

Alle oppgaver har et formål/agenda.

Oppgaver krever ressurser og verktøy for å kunne utføres.

De stiller krav til personen/gruppen som utfører oppgaven.

Personen/gruppen som utfører oppgaven påvirker resultatet.



Arbeid i organisasjoner

Task chain (oppgavekjede)

En arbeidsoppgave inngår i og består av en sekvensiell kjede av deloppgaver.

En måte å se på (briller - lense) en oppgave og leddene den består av.

- Oppgavekjeder går på kryss og tvers av hverandre.
- Disse må derfor koordineres for å skape verdi av arbeidet.

Ordinarily, complex artifacts are produced by many people doing numerous things. If we organize our view of work along a particular axis in this vast array of tasks, we can pick out a sequential *chain* of tasks, called a *task chain*, which describes the production sequence for an object or event. For example, in producing this report I am using a text processor. The chain of tasks for producing this report includes

(1) having an active computer account,
(2) getting access to the computer (e.g., finding an unoccupied, working terminal),
(3) possibly dialing in on telephone lines,
(4) logging on to the computer,
(5) typing the document,
(6) running the document through SCRIBE (a text formatting program),
(7) getting the formatted document printed (usually on a laser printer),
(8) distributing the document to my readers.

With the report itself as the axis of analysis, the task chain is clear. Of course, several steps in this chain may be executed repeatedly. Thus the *actual* task chain is different in each case from the simple abstract task chain represented here, and in general will be different each time in some respect. *In any particular instance, the precise structure of the task chain is unpredictable, because it depends upon the contingencies of the work process, including intersecting task chains.*

Arbeid i organisasjoner

Production lattice (produksjonsgitter)

Består av en kompleks og koordinert struktur av kryssende oppgavekjeder

- Med andre ord: Et “gitter” (nettverk) bestående av oppgavekjeder, som igjen utgjøres av individuelle oppgaver

Produksjonsgitter består av følgende:

Primary work (primærarbeid)



Articulation work (sekundærarbeid)



Diskusjonsspørsmål (10min)

- How does [the author] describe the processes of fitting, augmenting and working around?
- How are these concepts similar and different?

Misfits

Fitting

En strategi for å håndtere en misfit mellom arbeidsrutine og datasystem

1. Justere datasystem
2. Justere arbeidsrutinene
3. Justere begge

Augmenting

Gjøre ekstra arbeid for å ta igjen for misfits.

1. Verifisere og dobbeltsjekke data.
2. Lete etter kilden til problemet.
3. Samle informasjon fra flere kilder
4. Ytterligere opplæring.
5. Arkivering av data for å gjøre opp for manglende lagring

Working around

Bevisst bruke datasystemer på måter det ikke var designet for, for å omgå misfits.

1. Justere datainput.
2. Endre arbeidsrutiner.
3. Benytte alternative systemer.

Grisot, M. (2010). «Ordningslogikker i informasjonspraksiser - en case fra hjertetransplantasjon» i M. Aanestad og I. Olaussen (red.) IKT og samhandling i helsesektoren. Digitale lappetepper eller sømløs integrasjon. (available also in English)

Hvis ekstra tid:

- How does [the author] describe the concept of ‘ordering logics’?
- How are the ordering logics different from each other?
- Why do you think the concept of ordering logic is valuable in understanding the complexity of information infrastructures in organizations?

How does [the author] describe the concept of ‘ordering logics’?

- “Jeg har beskrevet hvordan hjertetransplantasjon er en kompleks prosess der mange forskjellige aktører samarbeider. Noen møtes hver dag eller rutinemessig på morgenmøter ved avdelingen eller i ukentlige «hjertemøter». Men noen møtes aldri, som transplantasjonssykepleierne ved Hjertemedisinsk og Thoraxkirurgisk avdeling. De har forskjellige prioriteringer og befatter seg med ulike ting. I det følgende analyserer jeg de forskjellige aktørenes arbeidspraksiser, med særlig fokus på informasjonsbruk. **Arbeids- og informasjonspraksisene viser at jeg kan identifisere fire ulike måter for aktørene å samarbeide på, og at det også er mulig å se at hjertetransplantasjon utføres forskjellig gjennom de ulike måtene å arbeide på**. Jeg analyserer hvordan fire ordningslogikker utøver hjertetransplantasjon som en prosess. Det er viktig å forstå at det ikke er fire forskjellige prosesser, men at ordningslogikkene eksis- terer sammen i de samme prosessene. I tillegg er ordningslogikkene avhengige av hverandre. Fire ordningslogikker blir identifisert i analysen fordi det var de som fremsto tydeligst i det empiriske materialet, men det er mulig å finne andre. De fire ordningslogikkene er gitt beteg- nelsene: Pasientfokusert, behandlingsfokusert, aktivitetsfokusert og resultatfokusert.
  ” (s. 63-64)

How are the ordering logics different from each other?

- Pasientfokusert ordningslogikk
- Behandlingsfokusert ordningslogikk
- Aktivitetsfokusert ordningslogikk
- Resultatfokusert ordningslogikk

Why do you think the concept of ordering logic is valuable in understanding the complexity of information infrastructures in organizations?

- Hjelper oss med å få rikere forståelse av systemene som må til for å kunne gjennomføre en oppgave med mange forskjellige aktører
- Synliggjør de forskjellige stegene i prosessen og de forskjellige perspektivene

Hanseth, O., & Lundberg, N. (2001). Designing work-oriented infrastructures. Computer Supported Cooperative Work (CSCW), 10(3-4), 347-372.r sømløs integrasjon. (available also in English)

Diskusjonsspørsmål (10min)

- What do [the authors] mean by ‘work-oriented’ infrastructures? How are these infrastructures different from other types?
- Which challenges do [the authors] identify in the design of work-oriented infrastructures?
- What does ‘irreversibility’ mean in the article?
- What are different design strategies mentioned in the article?
- Why do [the authors] argue that work-oriented infrastructures should be designed and implemented primary by their users?

What do [the a ures? How are these infra

This term draws e developed to support specific d universal services provide tructures means infrastru

5. Beyond universal service: work oriented infrastructures

Having argued that the design of information systems for hospitals has a lot to learn from the development of "classical" infrastructures, we will now move one step further trying to identify features of the paper based radiological infrastructure which go beyond those of "classical" infrastructures – features whose "design" can teach us some lessons about the design of electronic radiological infrastructures as well as others. Taking this step is of crucial importance because implementations of PACS systems so far seem to contribute to the reproduction of existing practices rather then changing them (Bryan at al., 1998; Tellioglu and Wagner, 1996). This was also what happened in the case we studied, and that will largely be the result of the three design proposals presented in section 4.3. In all these examples, some local changes and benefits may be achieved, but the overall structure stays unchanged. And, in fact, it may be even harder to change because the practice is now (i.e. after the implementation of PACS/RIS systems) embedded into larger and more complex material structures and the socio-technical network that needs to be changed to improve the practice has become even more irreversible.

We will argue that the radiological infrastructure described in this article has some features which it has been attributed in order to support specific communities of practice in their work. In this case we are talking about highly complex and specialized practices whose properties are largely hidden for those who are not members of these communities (and which also the members are unconscious about). We call such infrastructures *work oriented infrastructures* while the "classical" infrastructures can be called "universal service infrastructures" because they are providing universal services to all citizens. The services provided by the latter kind of infrastructures are fairly simple in terms of user interfaces and functionality, used by everybody, and equal for all. Power infrastructures deliver 220 (110) voltage current, telecommunication infrastructures give us telephone services so we can call our friends, roads enable us to drive our cars, etc. And the "user needs"

Which challenges do [the authors] identify in the design of work-oriented infrastructures? s.360

“The larger number of actors communicating, or the larger number of components linked together, the more important standards are. On the other hand, the larger a network implementing a standard is, the harder it becomes to change the network.”

(s.360)

What does ‘irreversibility’ mean in the article?

“Changing a network from one standard to another over a longer period means that different parts of the network are incompatible during that period. Incompatibility means that the network is not aligned – it does not work. However, the degree of compatibility plays an important role. To make a major change will cause a major incompatibility between the existing network and the new. Such an incompatibility causes problems and the intended change will often not take place. To succeed establishing a new network a new practice must be established, the new must match the old during the transition period.”

(s. 361)

What are different design strategies mentioned in the article?

“The infrastructure is built in a piecemeal (bit-by-bit) fashion over a long period – new elements are added to the existing infrastructures and parts are improved or replaced by improved ones.” (s. 366)

“The difference between improvisation in the design, or improvement, of “traditional” (or rather standalone) systems like design of the Lotus Notes application that Orlikowskti (1996) describes, is related to the open character of infrastructures. Contrary to the Notes application, they are not used by a closed user group, but rather a large (indefinite) number of connected and overlapping communities of practice. In the collaboration within and between these communities of practice different but overlapping groups of services provided by, or parts of, the infrastructure are utilized.” (s.367)

Why do [the authors] argue that work-oriented infrastructures should be designed and implemented primary by their users?

“We suggest that the design of PACS and RIS could be improved by considering these systems as work oriented infrastructures. This term is supposed to draw our attention to the fact that these systems are developed to support specific and highly complex work tasks. We conclude that such infrastructures are, and should be, designed and implemented primarily by their users based on their actual use of the technology.”

(s. 370)

Takk for i dag!

Send evt andre spørsmål på mail:

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