GÖTEBORGS UNIVERSITET

STUDENT

0003-RJJ

TENTAMEN

TIA301 Tentamen

Kurskod	--
Bedömningsform	DO
Starttid	20.11.2023 08:30
Sluttid	20.11.2023 10:30
Bedömningsfrist	--
PDF skapad	17.11.2025 13:07
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ℹ HT23 reexam: Welcome to examination!

This examination consists of open questions, sometimes referred to as 'essay questions'. It includes ***7 questions***, each rewarded with a maximum of 3 points. The examination is limited to ***2 hours.*** To pass it you need ***13 points*** (60%)

The grading will focus on the overall capability to explain and apply ideas. It will assess whether (1) answers are logically coherent, whether (2) they are grounded in readings, lectures, and discussions, and, when applicable, that (3) answers engage the key concepts of the course.

Advice:

Please, read the questions carefully! Each question normally consists of multiple requests, such as: "***Define***... and ***explain***... ***illustrate*** ... with an example..."

If you feel unsure about how to respond or don't remember exactly what papers or lectures said, trust your instincts and stay focused on the question. Explain in your own words, to the best of your abilities. Do *not* start to broadly talk about related things, to show you know other things.

It could be worth noting that longer answers are not necessarily better answers, since long texts increase the risk of ending up with inconsistencies.

1 HT23 reexam Question 1

Describe the concept of *agency* and explain how it can be applied to understand the role of technology in a socio-technical system. Include an example of how technology is an agent of change.

Fill in your answer here

Agency is the capacity to act. The concept refers to how individuals and groups take actions and make decitions that influence lifes, the behavior and the surroundings. In the socio-technical concept, technology can also have agency since it is considered that objects and material can also influnce the surroundings and the behavior in a network or system.

One example of technology that can be viewed as an agent is SW algorithms. Software algorithms could be considered as agents since the algorithm makes constant decitions based on pre-defined set of rules, they algirithm processes data, creates output and acts on the output or information. The algorithm is an active agent in this case, since it continuously acts on its own based on the rules set from the beginning.

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2 HT23 reexam Question 2

Use your own words to define the concept of *affordance*. Discuss its significance – how it can help us – in understanding the properties of material things.

Fill in your answer here

Affordances are the possible actions of an object for the user. What it allows the user to do, but it does not change with the need of the observer. If we have an button on a webpage, it affords for clicking. It can easily be understood by the user what it affords them to do, since it reminds them om buttons in real-life. They know that they can click/press on a button.

The significance of affordances is that somewhat complex digital objects can be understood in a fairly easy way simply by looking like something that we have in the physical world. By designing a button on a webpage to look like a physical button, the user can understand what they can (are afforded to) do with it. And what can be done with the object does not change with the need of the user, it allows for a specific task.

This can also help when designing objects, to make it easy to understand for the user what it is intended for.

Ord: 172

Besvarad.

3 HT23 reexam Question 3

Identify one affordance that is distinctive to digital artifacts. Explain how this affordance is intrinsically linked to the digital nature of the artifact. In your response, select a specific example and argue how this digital affordance has influenced socio-technical phenomena, such as innovation, usage, business models, or organizational practices.

Fill in your answer here

Malleability is such an aggregate affordance. The digital artifacts can be changed into something else. In the digital world things are not as rigid as they previously were, in the past a car was produced and it looked the same throughout its lifetime. But these days a car can be changed/shaped to have another behavior via the SW even after it has been produced and sold.

Even though the car as such is a physical object, the SW in the car is a digital artifact that can change (or add) behavior, features or functions of the car. When it comes to the innovation this allows us to not simply stay in one place with the product after it has been created, we can still make modifications and improvements throughout the lifetime of the car. The car we buy today will most likely have many improvements and additions to the SW in a year.

We willl most likely be able to use the car for more things than we can today, since features are constantly added to the vehicles, for example google store/play has been added to many of the newer cars, which allows the costumers to download applications to the car and/or use the car similarly as the smartphone.

This changes the way of thinking in organizations, since the physical car is not where most of the earnings come from, but it's the SW updates, the added features and things that are more SW releated that will generate the income in the times to come. So the focus is on what kind of SW features can be sold to the costumer, after the actual physical car has been sold.

Ord: 279

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4 HT23 reexam Question 4

While the literature presents several perspectives on generativity, there is consensus that generative processes are *emergent*. Describe the characteristics of an emergent process and provide an illustration of how one such a process has played out in the development or evolution of a specific digital technology.

Fill in your answer here

An emergent process has no end goal, it does not repeat itself but is not random. In the digital world that can be found in the SW development, where the process allows for feedback loops, changes, testing, reshaping and redoing as a continuoues flow to create the needed output.

One example of an emergent process are the remote SW updates/downloads for the cars, lets use Tesla as an example (over the air updates). They continuosly update the SW in the cars, even after they are produced and sold to a costumer, to improve the performance, add new features or simply improve on previous SW in the cars.

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5 HT23 reexam Question 5

We have discussed the role of boundary objects as 'bridges' between different social worlds.

- Describe how a boundary object serves to connect these diverse groups.
- Analyze the usefulness of this bridging function in the context of design processes, particularly in fostering collaboration and innovation across distributed and interdisciplinary teams.

Fill in your answer here

Boundary objects connect the different groups by being objects that can be understood by different roles, background or groups of people, the objects are plastic enough to adapt but robust enough to maintain their identity. Maps can for example be used/understood by different social groups and be used for many different things but they still maintain their identity. Groups such as tourists use the maps for guiding themselfs in the cities, while urban planners use maps in their line of work.

It it useful since people with different background (from different social worlds) will be able to undertand the concept. When it comes to design process, we have the *design boundary objects* that are boundary objects that specifically target the design process, those kind of objects can be things like prototypes or sketches. By creating these objects it will be easier to understand how and what is being developed and what the aim is.

Different roles will use the objects for different purposes, econimists to get a better understanding of the costs, engineers to plan if the indented object can be improved and so on. When having a tangible object it will make the communication across the borders of the social worlds much easier.

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6 HT23 reexam Question 6

Give a concrete example of a platform boundary resource, as discussed in our course. Explain how it is useful to (1) the platform owner and to (2) an independent application or service developer.

Fill in your answer here

One platform boundary resource is IDE (Integrated development environment). In these applications (e.g., PyCharm, Ecplipse or Microsoft Visual Studio) the service developer can write and compile code. In realtion to the IDE there are also APIs (application programmin interface) that also work as a framework for the developers.

The IDE allows for development in an environment where the sevice provider can work freely but still not directly linked to the core of the platform.

The boundary resources are useful SW tools, regulations and guidelines since it gives an arms-lenght relationship between the Platform owner and the developers. The developers get the information, guidelines, tools and services needed to develop, but are still kept on a distance from the core of the platform. The developers only get access to what the platform owner allows them to access.

Ord: 136

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7 HT23 reexam Question 7

As established firms take on digital innovation, they encounter various competing concerns that need to be carefully managed. Identify one such competing concern that arises specifically due to the process of corporate digitalization. Explain the origin of this competing concern and resonate on how firms can balance or mitigate it.

Fill in your answer here

One of those competing concerns could be to have correct resources for the shift to digital innovation.

Digital innovation is the process of creating, developing and implementing new output, ideas, processes or products that add value to the organization, its costumers and/or society as whole. But to to able to do this, the organization needs to know how to use the resources they have and where resources may be missing to be able to make a shift towards digital innovation and therefor be able to compete with other firms on the market.

Ord: 92

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