Analysing Users Groups

School of Computer Science | Software Requirements and Design
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Content

- Benefits from this lecture
- Important when making software
- Method for User Group Analysis
- User group analysis example

- Reading
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  - Chapter 2.2.4 What is user-centered approach?
  - Chapter 2.3.1 Who are the users?
  - Chapter 2.3.2 What are the users needs?

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Structure of the lectures

Benefits of the lecture

Reading

Sections

Benefits from this lecture

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This lecture will support you in:

- Doing user group analysis in the first problem solving assignment
- User group analysis will be a part of the first hand-in group assignment
- Analysing other requirements
- User groups will be used again during the course

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Important When Making Software

WHY HOW
WHAT WHEN
WHO WHERE

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Why are we making software?

Why?

Results

Various Users and User Groups

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Video of User Involvement

- https://www.youtube.com/watch?v=szr0ezLyQHY

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We Need Information Before We Design

- Who will be using the system?
- What characterizes them?
- What are their goals (activities)?
- What equipment will they use?
- Where will they use it?
- How often will they use it?

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3 Principles from Gould and Lewis – pg. 48

1. Early focus on users and tasks
   1. User's tasks and goals are the driving force behind the development
   2. Users' behavior and context of use are studied, and the system is designed to support them
   3. Users' characteristics are caputred and designed for
   4. Users are consulted throughtout development from earliest phases to the latest
   5. All design decisions are taken within the context of the users, their activities, and their environment
2. Empirical measurement
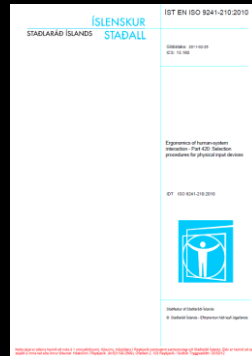   – Define user experience goals
3. Interative design
   – Refine based on feedback

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What do we mean by the term „User"

- Person that interacts with a product
  - ISO 9241-210

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Method for User Groups Analysis

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Analysing User Groups

1. WHO are in the user group?
   - Background information for that group

2. WHY will the software be used?
   - What are the main goals users have in this user group

3. WHAT equipment will they use?
   - Describe the technical equipment needed

4. WHERE will the software be used?
   - Describe the real environment where the software will be used

5. WHEN will this user group use the software?
   - How frequently and how long each time?

6. HOW important is the group?
   - Is this the main user groups that you will focus on or less important?

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But First you Name the User Groups

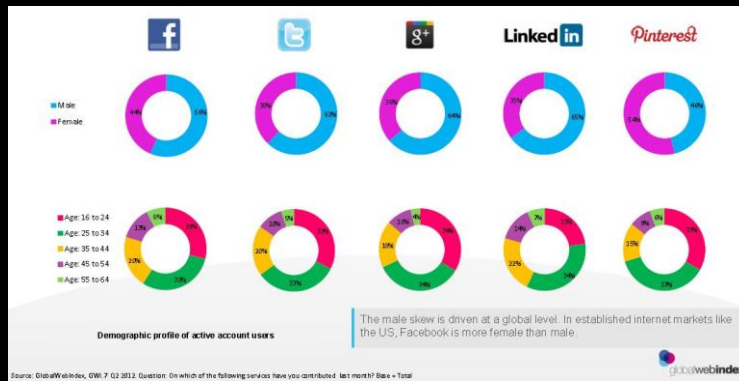- Something that characterises this user group
- Maybe also have photos

The name of the user groups

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One Example – Analysis of User Groups

1. WHO - Background information
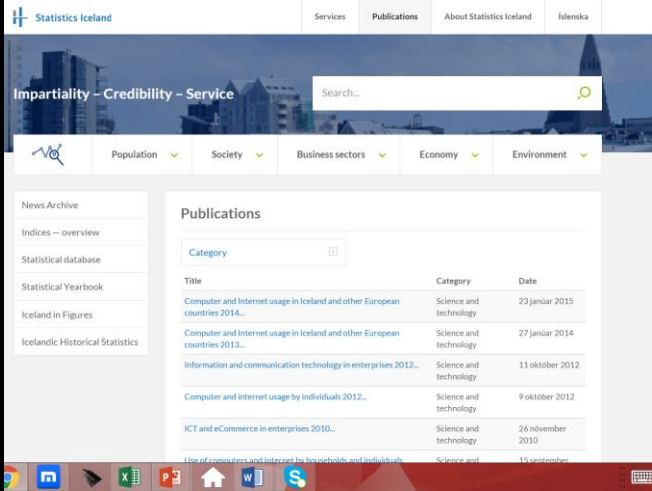
- **Age:** What is that Age range?
- **Gender:** Does the target group for this system have a particular gender or is it like the general public?
- **Education:** Does the user group have some education in common?
- **Abilities/disabilities:** Does this group have some abilities or disabilities that need to be considered when designing for this group?
- **General computer knowlegde:** How is the computer knowledge of this user group in general?
- **Number of users:** How many users do you estimate will be in the user group?
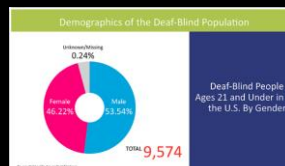
Sometimes We Need Statistical Information

- We can get statistics at the web from Statistics Iceland

Abilities of the users

- What is their knowledge for the particular domain?
  - Do they know much or little about these goals that they want to accomplish?
  - Are they experts in similar things?
    - If you want to design a game – are they designers?
    - If you want to assist in buying fx. Wine – are they wine experts?
- What is their general computer knowlegde?
  - How skilled are they using computers?
  - Beginners, intermediate, experts

Designing for disabilities

- This has had more focus in recent years
- We are asking:
  - Can people solve their daily tasks?
  - 15% - 35% of the general public answers that their disabilities affect their daily life
- User interface designers should pay attention to people that are visually impaired
  - 8% males are color blind

- Good instructions from Microsoft – Inclusive design
  - https://www.microsoft.com/design/inclusive/
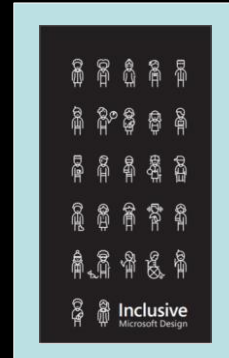
2. WHY - Main user goals

- The main question here is why would this user group use the software?
  1. What are the main goals that this user group wants to accomplish?
  2. What is the most important goal for them?
  3. How can we help this user group?
  4. Are there any particular problems you think you can help them with?
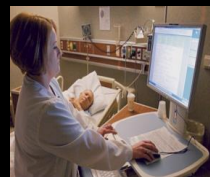
3. WHAT – The Technical Equipment

- What is the technical equipment this user group will use?
  - An indepth understanding of the physical and virtal interface compents of the various computing systems
  - Here the focus is on the technical environment
  - Often we focus here on what equipment do you need to be able to run the software

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Various Equipment

4. WHERE - the context

- Where will the software be used by this user group?
  - The actual space where the software is used
  - At one place vs. everywhere
    - At a hospital vs. In the nature vs. All over
  - Desktop computing vs mobile computing

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Various Contexts

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5. WHEN – How Much and How Often?

- When will this user group use the software?
  - Once a year vs. 24/7
  - At any time vs. Only when you need to do something
  - Spare time vs. During work
  - Games vs. Software used to solve tasks
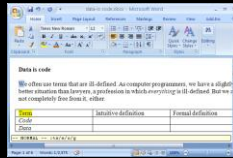
Usage of the System Affects the Design

- How often?
  - Daily, weekly, monthly, yearly
- How long each time?
  - minutes, hours, days
- The users get skilled after repeated use
  - The tax report
  - Google, ja.is
  - Intranets
  - emails

We love our users

They reward us by staying our users

User Skills Groups

- Novice users (Byrjendur)
  - Have never or only few times used the system
- Intermediate users (Meðalnotendur)
  - Have some skills, are not experts and not novice
- Expert users (Sérfræðingar)
  - Use the system a lot and know it very well

- This is just for skills using this particular system
  - Not general computer knowlegde

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Designing according to the user skills

- Novice users have been emphasized a lot
  - We are only novice users once!
- Most of the users are intermediate
  - Often the design is taking care of novice or experts, not that much the intermediate
  - The users can have different skills for each task/goal
- Expert users
  - Use 10% - 20% as experts, the rest as intermediate

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6. HOW Important is this User Group?

- When looking through all the other information
  - Who, Why, What, When and Where you can decide what will be you focus user group
  - The design of the interface will focus on the most important user groups
    - But of course the other user groups are important and should NOT be forgotten

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User Group Analysis Example

One Example - LIN

- The Icelandic student fund decided to redesign their website and look at the construction of the website from the users perspective
- This was in 2010

- The look of the website

The Example

- The goal is to give better service to their users and support that users can easily finish their tasks on the web and do not have to call the personal at the student fund
- What user groups do you see in the example?

Results

What I Analysed

- Students in Iceland
- Students abroad
- Payers - People that are paying their loans
- Guarantor (ábyrgðarmenn) - Responsible people for students
- Agents (umboðsmenn) - Supportive people for students

- The staff at LIN
- Other users

3 User Groups
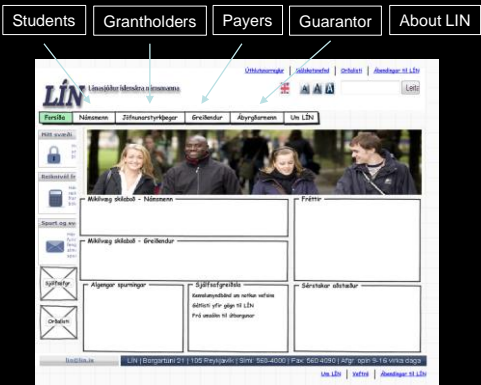## – Who, Why, What, Where, When, How

	Students in Iceland	Students Abroad	Graduated Student
WHO	Age: 19 - 99	Age: 19 - 99	Age: 20 - 99
	Gender: All genders	Gender: All genders	Gender: All genders
	Education: Graduated from high school	Education: Graduated from high school	Education: Graduated from university
	Abilities/Disabilities: nothing special	Abilities/Disabilities: nothing special	Abilities/Disabilities: nothing special
			Computer skills: Various, depends on the age
	Computer skills: Very good	Computer skills: Very good	
	Number: ca. 4.000	Number: ca. 2.000	Number: ca. 30.000
WHY	Apply for loans and grants, look up the status of the laons and get information	Apply for loans and grants, look up the status of the laons and get information	Get information on the loans and payments
WHAT	The technical environment varies, but ususally they have good equipment and internet connection	The technical environment varies, because the students can be all over the world, but most of them have good equipment and internet connection	The technical environment varies, but ususally they have good equipment and internet connection

	Students in Iceland	Students Abroad	Graduated Student
WHERE	The physical environment is usually good both at home and at the university	The physical environment is usually good both at home and at the university	The physical environment is usually good
WHEN	How often: Mostly used in start and the end of the semester, less inbetween	How often: Mostly used in start and the end of the semester, less inbetween	How often: Mostly used twice a year, when paying the payments
	For how long each time: The system is used for ca. 30 mins - 1 hour each time	For how long each time: The system is used for ca. 30 mins - 1 hour each time	For how long each time: The system is used for ca. 15 mins each time
	Skills: Users will never get skilled in using the system, since they use it so infrequently	Skills: Users will never get skilled in using the system, since they use it so infrequently	Skills: Users will never get skilled in using the system, since they use it so infrequently
HOW	MOST IMPORTANT + Students Abroad	MOST IMPORTANT + Students in Iceland	Second most important user group

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Reflected in the new design

Students Grantholders Payers Guarantor About LIN

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Final design

Students | Grantholders | Payers | Guarantor | About LÍN

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Now

Umsókn um undanþágu frá gjalddaga 30. júní og 1. júlí

Umsóknareyðublað er opið á Mitt LÍN

Sækja um
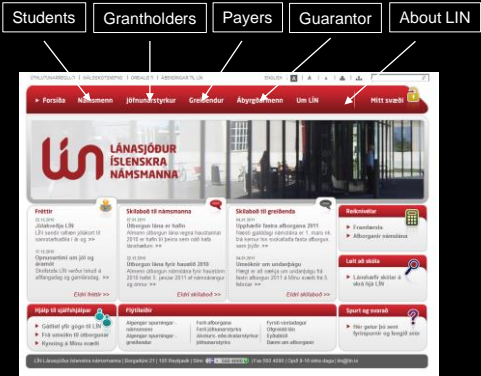
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Further Analysis Using User Groups

Greining á nytsemi fyrir öll verkefnin

Í töflunni er greint hversu auðvelt er að leysa eftirfarandi verkefni. Einnig kemur fram í töflunni, hvaða notendahópar munu vilja leysa verkefnin á vefnum.

	Námsmenn vegna lána	Greiðendur námslána	Jöfnunarstyrkþegar	Umboðsmenn	Ábyrgðarmenn	Aðrir notendur	Mjög auðvelt	Auðvelt	Miðlungs	Frekar flókið	Mjög flókið
1. Fá svör við: hvernig á að sækja um lán	X			X						X	
2. Fá svör við: hvernig kjörin eru	X			X				X			
3. Fá svör við: hvenær kemur lán til útborgunar	X			X				X			
4. Fá svör við: hvaða nám er lánshæft	X			X						X	
5. Fá svör við: ábyrgðir á lánum	X	X		X	X				X		
6. Ferlið frá a - ö (umsókn, útborgun, afborganir..)	X			X				X			
7. Upphæðir og gjalddagar afborgana		X			X				X		
8. Hve lengi standa endurgreiðslur yfir	X	X		X	X						X
9. Möguleikar að borga upp lán	X	X		X	X						X
10. Úrræði vegna greiðsluerfiðleika		X			X		X				
11. Hvað gerist ef afborgun er ekki greidd		X			X		X				
12. Hvernig á að sækja um styrk			X				X				
13. Hvenær kemur styrkur til útborgunar			X								X
14. Hvaða nám er styrkhæft			X					X			
15. Hvaða skilyrði eru fyrir styrk			X					X			
16. Upplýsingar um hlutverk umboðsmanna				X						X	

User Groups Are Used in User Stories

As a <user group>,
I want <goal>
so that <reason/value>

Sem <Notendahópur>
get ég <Aðgerð>,
til að <Ástæða/ Viðskiptagildi>

As a user, I can reserve a hotel room

As a vacation planner, I want to see photos of the hotel

As a user, I can cancel a reservation

As a frequent flyer I want to rebook a past trip, so that I save time booking trips I take

Summary

- Benefits from this lecture
- Important When Making Software
- Example of User Group Analysis
- Describing User Groups

- Remember
  - Problems solving classes start today for HMV and Wednesday for group 1, 2, 3 and 4
  - You will do user group analysis as the project solving class assignment
  - You will get a recorded lecture on Friday in Echo360

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