

CSC401 Lecture 1 Summary

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Rich Picture

Purpose

Why do we develop a software solution. First we have to find the problem. Analyse it.

We will learn some analysis techniques. We start with Rich Picture to get a generalized idea.

Starting

We will get a better understanding of the system when we start to make it.

What we need to include is discussed.

The green highlighted area is the existing system. The other stuff are external. → uses shown. We draw rich picture to see where we can automate already existing processes.

Dialog boxes discuss the issues. The arrows describe the process. Logos are used to represent people and structures.

$$Doctors \xrightarrow{treat} patients$$

An issue of Doctors are they can't remember stuff long time ago. So that would be expressed in the dialog box.

In another type of rich picture rather than have arrows, we list the activities performed by the structure or people below.

We use a dashed arrow --> where direct participation is not required. Also if there is any room for vagueness we use dashed lines.

Bidirectional arrows <-> are used where both actors participate. Both entities are equally important.

Model 1: Process Flow

A student enters the library → Searches for book → Finds book → register books → RFID reader → local pc searches database for availability → etc

But we won't use this, we won't represent process flow in rich picture. We will do that in BPMN diagrams.

Advice for group given

What to do

Rich Picture can be less detailed. But making a detailed picture will help the analysis in later stages.

System Element Analysis

A system is a combination of tasks done by entities to achieve some goal. We will be working with Information System.

Information System (IS)

Arrangement of people, data, processes and IT. Where IT is a term where we use computer tech (hardware and software) with telecommunication technology (data, image and voice networks etc.).

The Six Elements

Human, Non-Computing hardware, computing hardware, software, database, communication and network.

Human: Stakeholders

Owners, Users, Dev Team, External Service Providers.
Stakeholders consist of:

- Primary (Primary Customer)
- Secondary (People responsible to develop the system (Dev Team))
- Key (System owners, key decision makers, goal setters, authority)

How to Identify Stakeholders

Contact people after brainstorming, research work. For a 6 month project, we will do most rigorous analysis within 15 days. But analysis doesn't stop. It is an ongoing process. The requirements might change.

All analysis for the course project should be done within 5 days.
2 days for existing system analysis. Show to client. Fix.
Next 3 days for proposed system. Show to client. Fix.

Non-Computing Hardware

Forms, Reports, Books, Printed Stuff etc. We need to know if people use them and how they use them.

Database

Log files, Register Book, SQL Server

Why use Six element analysis

Reduce non computing elements.

Basic Data Entry

For each element, we list out who/what falls under the category. For each we show what they do or what things are used for. Step by step activities must be mentioned that work towards a goal.

Advice

Always focus on your goal. Do not mention things irrelevant to you.
Take max 5 days after project details are given for rigorous analysis.
Identify around 15 Processes.