



OLSH Counseling Center Career Speaker series: Careers in IT

WITH FOCUS ON SOFTWARE ENGINEERING

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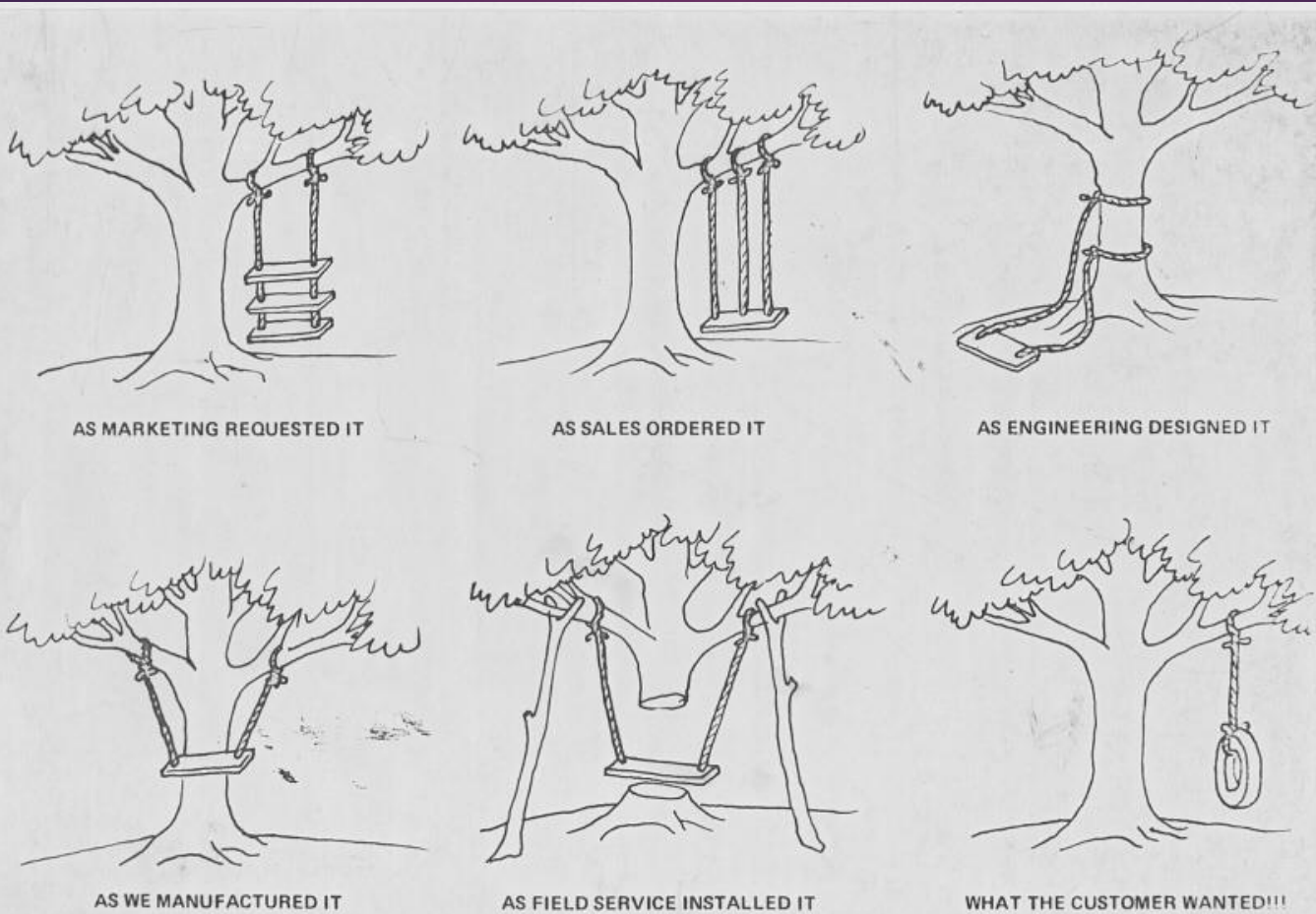
Agenda

- ▶ IT Career Paths (from <http://www.itcareerfinder.com/it-careers.html>)
 - ▶ Users
 - ▶ Research
 - ▶ Hardware
 - ▶ Software
 - ▶ Management
- ▶ Focus on Software Engineering, using my career as an example
- ▶ Questions & Answers

At its core, IT focuses on problem-solving . . .

- ▶ Within IT, there is significant value in specialized skills and knowledge
- ▶ Remember, IT devices are paper weights without software
- ▶ When creating/developing/maintaining software, understanding:
 - ▶ Principles of logic
 - ▶ Mathematical concepts
 - ▶ Scientific method

... solving users' problems



"COMMUNICATION" MEANS: SAYING AND HEARING HAVE THE SAME MESSAGE

Tree Swing picture from 1970s - Businessballs.com (Ack T & W Fleet)

Careers in IT: Users

- ▶ AutoCAD Drafter -- design technical schematics for products & structures.
- ▶ Computer Animator -- create 3D motion graphics and visual effects.
- ▶ Graphic Designer -- fuse creativity and technology to create visually engaging graphics that communicate a message.
- ▶ Health Information Technician -- Manage Electronic Patient Data.
- ▶ Help Desk Technician -- provide technical support for IT end-users.
- ▶ IT Security Specialist -- Defend an Organization's Information Systems.

Careers in IT: Research

- ▶ Computer Scientist -- research and develop new technologies.
- ▶ Data Scientist -- analyze business data for actionable intelligence.
- ▶ For example, Carnegie Mellon University was one of the original nodes of the internet (see ARPANET NCP project -- <https://icannwiki.org/ARPANET>)

Careers in IT: Hardware

- ▶ Database Administrator -- organize and manage a company's data.
- ▶ Hardware Engineer -- design and build computer systems.
- ▶ Network Administrator -- manage networks & communications systems.
- ▶ Network Architect -- plan and design computer networks.
- ▶ Robotics Engineer -- design and create robots and robotic systems.

Careers in IT: Software

- ▶ User Interface Developer -- shape the way we interact with the digital world. _
- ▶ Mobile App Developer -- create software for mobile devices.
- ▶ Video Game Designer -- merge creativity, technical skills and a passion for gaming to create cutting-edge games.
- ▶ Web Developer -- create web pages and web-based applications.
- ▶ Computer Programmer -- write the code that fuels computer operation.
- ▶ Software Engineer -- develop computer systems and applications.

Careers in IT: Management

- ▶ Computer Systems Analyst -- manage IT solutions to drive business goals.
- ▶ IT Project Manager -- oversee large-scale technology projects.
- ▶ IT Manager -- plan, direct and support IT initiatives.
- ▶ Chief Information Officer -- is responsible for the company's technical direction.

Careers in IT: Software Engineering

- ▶ My current position in corporate IT department
 - ▶ My current position is as Application Developer Lead on the PNC Capital Markets Fixed Income MIS team
 - ▶ “Jack-of-all-trades” who helps identify/define technical requirements for projects and executes/validates implementation tasks that meet those requirements
 - ▶ Schedule is flexible. Generally 8:30am to 5:30pm Monday through Friday, but can vary due to project requirements
 - ▶ My day-to-day activities vary depending upon the current status of the projects on which I am working
 - ▶ Open office environment to encourage collaboration; work from a laptop.

Careers in IT: Software Engineering

- ▶ At independent software manufacturer
 - ▶ Created software for other IT professionals:
 - ▶ Mainframe COBOL programmers
 - ▶ Network administrators
 - ▶ C/C++ programmer who became expert in COBOL syntax and integrating network management tools into Unicenter enterprise systems management architecture
 - ▶ Generally 8:30am to 5:30pm Monday through Friday, but can vary due to project requirements
 - ▶ My day-to-day activities vary depending upon the current status of the projects on which I am working
 - ▶ Worked from cubicle using desktop PC; worked with remote teams

Careers in IT: Software Engineering

Questions?