From Processing 2 Java

Networking



TUE Technische Universiteit Eindhoven University of Technology

Where innovation starts

Communication

 The process of conveying information from a sender to a receiver with the use of a <u>medium</u> in which the communicated information is understood by both sender and receiver.





Protocols*

- Most frequently used Internet protocol
 - TCP/IP = TCP + IP
- Other protocols (conform the ISO OSI layering):
 - Application layer
 - Transport Layer
 - Network Layer
 - Data Layer

(HTTP, FTP, TELNET) (TCP, UDP) (IP, ARP) (Ethernet)

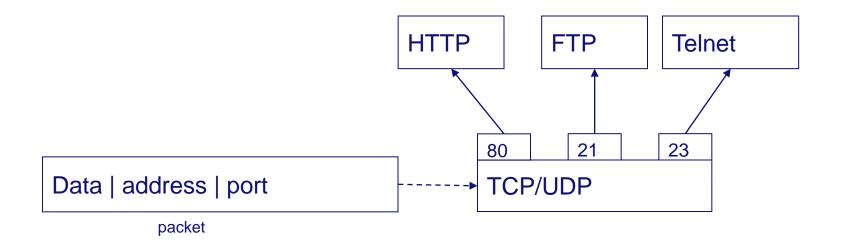
* Extremely Limited view !!!



Addressing

• IP address

- 131.155.70.123 / somepc.tue.nl
- Port numbers
 - 80, 21, 23...





Example 1

Whols Client

(show in Eclipse)

🕌 Whois Client	
File Edit Help	
Whois Server Version 2.0	^
Domain names in the .com and .net domains can now be registered with many different competing registrars. Go to http://www.internic.net for detailed information.	=
WWW.GOOGLE.COM.VN WWW.GOOGLE.COM.TW WWW.GOOGLE.COM.TR WWW.GOOGLE.COM.SA	
WWW.GOOGLE.COM.PE WWW.GOOGLE.COM.MX WWW.GOOGLE.COM.CO WWW.GOOGLE.COM.BR	
WWW.GOOGLE.COM.AU WWW.GOOGLE.COM.AR	
To single out one record, look it up with "xxx", where xxx is one of the of the records displayed above. If the records are the same, look them up with "=xxx" to receive a full display for each record.	
>>> Last update of whois database: Mon, 05 Oct 2009 11:27:10 UTC <<<	
NOTICE: The expiration date displayed in this record is the date the	-
www.google.com Go Clear Exit	



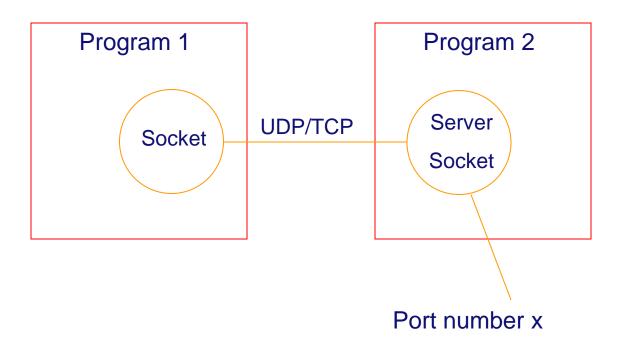


Quote client

(show in Eclipse, start server first!!)

🖆 Application	
File Edit Help	
"Very funny, Scotty. Now beam down my clothes."	
Go 2121	









• Example Server/Client with robot in Eclipse



Homework

1. Use the examples to create 2 programs That allow you to control the robot from a distance. The programs have to communicate to each other using sockets.



Links

- <u>http://java.sun.com/developer/onlineTraining/Progra</u> mming/BasicJava2/socket.html
- <u>http://java.sun.com/docs/books/tutorial/networking/i</u> <u>ndex.html</u>

