

Peer-to-Peer Systems

Errata

Michael Welzl michael.welzl@uibk.ac.at

DPS NSG Team <http://dps.uibk.ac.at/nsg>

Institute of Computer Science
University of Innsbruck, Austria

Introduction

- I held this lecture for the first time
 - it was a very, very busy semester
- Some mistakes happened...
 - Some slides contain errors, some are just confusing...
 - ... I'm only human
- Other humans who write books publish "errata" (e.g. available from the book website - now even the IETF has errata for RFCs)
 - this is an "errata" slide set for the lecture
- Intention: make your life easier when preparing for the test
 - avoid trying to understand a non-understandable slide

General note about this lecture

- Its contents are (mainly) from research
- P2P systems are relatively new; there are no standards
 - de facto standards exist: e.g., everybody knows about DHTs and Chord
- Some things are vague because even the original description is vague, but still they are interesting enough to be included
 - I won't ask you about such vague things in the test
 - Don't try to see "behind" what's on the slides: if something isn't properly explained but only vaguely hinted at, this is as much as you should know
 - e.g. no need to try to find out the exact joining algorithm for P-Grid
- Some things are unknown because they were not defined
 - e.g. some of the DHTs are just ideas that were described in papers, not systems that you can download and use
- Some things are not important
 - e.g. it doesn't matter if CAN partitions the space in the order of X, Y, Z or Y, X, Z
 - Try to be consistent in the test, and if your solution doesn't match what is on the slides, explicitly state what you're doing and why you're doing it.

Errors

- Part 1
 - Slide 14: acronym for Network News Transport Protocol is NNTP, not NNCP
- Part 2
 - eDonkey and FreeNet description partially confusing
 - You should remember that eDonkey can let peers forward parts of files
 - You should remember that FreeNet is about anonymity, and its operation is somewhere between a DHT (because it routes towards hash codes) and a "normal" unstructured system; it leverages the small world effect
 - Anyway I won't ask you about these two systems in the test

Errors /2

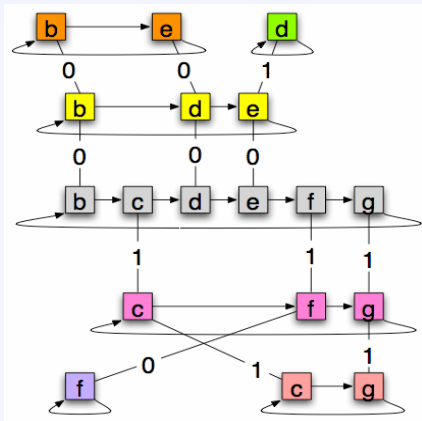
- Part 2 (cont'd)
 - Inconsistency on slide 64 (thanks to Daniel Strigl for spotting this)
 - “Leecher serves 4 best uploaders, chokes all others”
 but the Mahlmann/Schindelhauer book says:
 - “Jeder Peer unterhält eine Liste von Peers, die gedrosselt werden. ... Hierzu speichert jeder Peer eine Mindestanzahl von gedrosselten Peers (z.B. vier). In diese Liste werden nun diejenigen Peers aufgenommen, von denen der Download am schlechtesten war.”
 - Don't know what's correct right now, but won't ask you about this detail
- Part 4
 - Remove slide 78 (Chord with finger tables example)
 - It's clear enough (even clearer :-)) without this slide

Errors /3

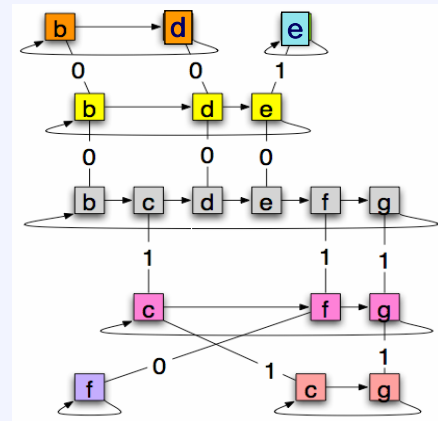
- Part 5
 - Remove slide 30 about network proximity in Pastry (simply confusing and unnecessary)
 - Replace “Knoten” with “Node” on slide 43 :-)
- Part 6
 - Slide 4: remove, from the list of Symphony enhancements: “Route to the neighbor that **minimizes absolute distance** to destination” (unclear why this is an enhancement - it's supposed to be done anyway)
 - Slide 17: routing in a distance halving network
 - unclear how the routing algorithm operates in a distributed fashion
 - I won't ask you that
- Part 8
 - Slide 19: remove statement “up to 18% of DNS traffic goes to root servers” (because I'm not sure that this is credible, should have checked original source)

Errors /4: part 7, slide 15

Wrong:



Right:



Sorry!

References / acknowledgments

- Errors from:
 - no, just kidding, I'm not pointing my finger at anyone - it's my lecture, my responsibility, my fault :-)