INSTITUTE COMPUTER ORIENTATION

Understanding the lifeline of insti…

Outline

- Address from Head CC
- People
- IITB Network
- Services & Facilities @ Insti
- TroubleShooting
- Linux & Open Source Softwares
- Windows

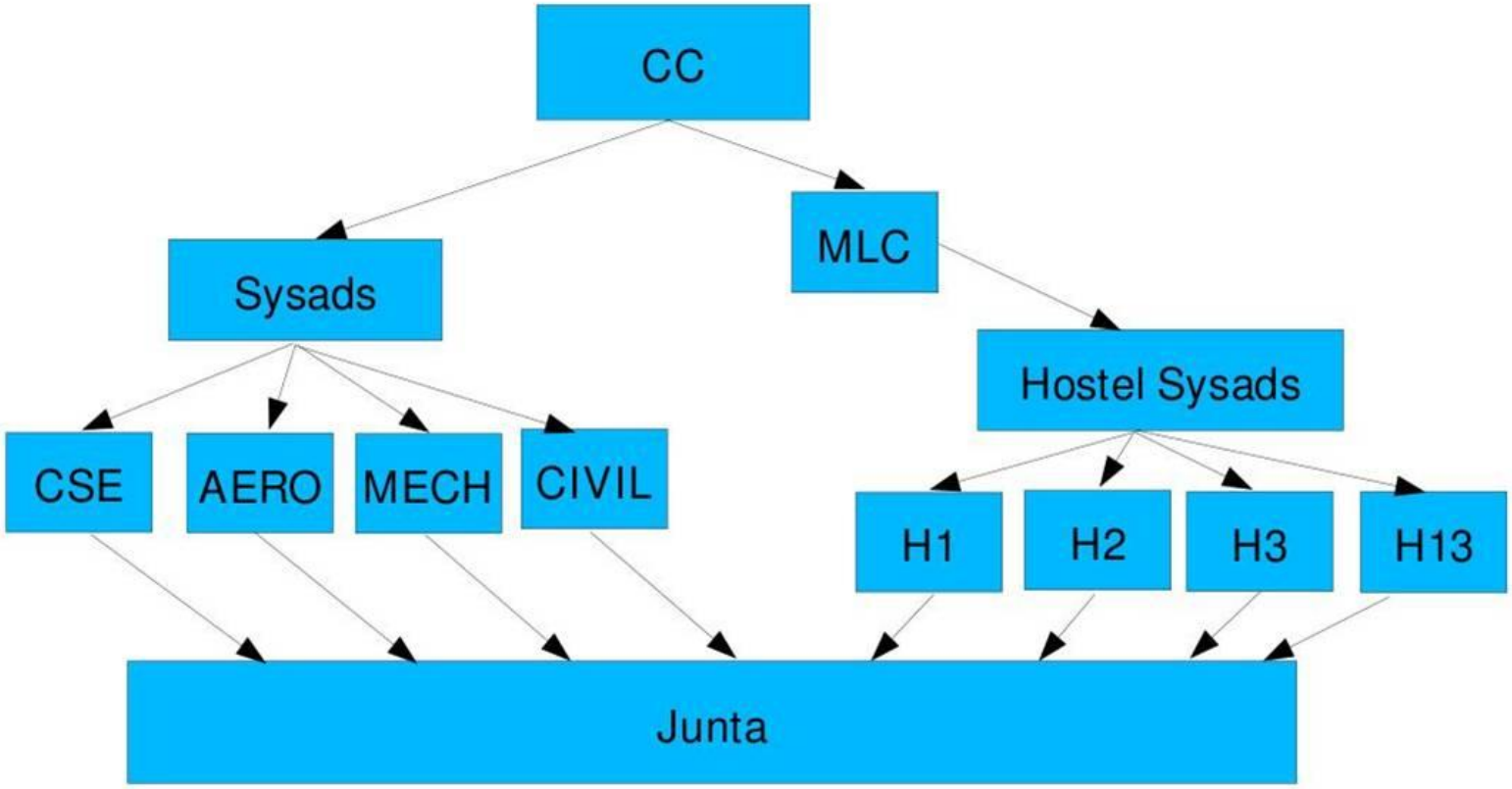
PEOPLE

People

- Computer Center?
- Hands of CC
  - MLC
  - Department Sysads
  - Hostel Sysads
- CC Staff
  - Web, System, Networks…
- Vendors

Maxmann	H4, H5, H7
Benchmark	H1, H2, H3, H11
Unicomp	H9, H12, H13
Best IT World	H6, H8, H10

Administrative Structure



IITB NETWORK

Basic Info

- What is a network?
  - Set of interconnected computers

- IITB Network (will undergo major Revamping)

  - Internet Speed: 32 Mbps → 104 Mbps
  - Connectivity at Rooms: 100Mbps → 1 Gbps
  - 1 Gbps Optical Network Backbone → 10 Gbps

What kind of a Network does IITB have?

- Provides both Wired and Wireless connectivity.
- IITB's network is segregated into the following
  - Academic Section
  - Hostels
  - Residential Area
- Provides network to all Departments, Hostels, Administrative Sections, and the Residential Area.
- Gigabit connectivity to each department and hostel.

IIT Bombay Core Network

SOM(10.127.1.250)
CADC(10.145.250.1)
META(10.111.1.250)
CIVIL(10.104.1.250)
CC-150(10.150.1.250)
KRESIT(10.129.1.250)
RESNET(10.160.250.2)
DMZ-201(10.201.250.2)
CC-1106(10.100.1.250)
LAN-MB(10.99.251.250)
PHYSICS(10.112.1.250)
Hostel10(10.10.250.1)
H8-Kresit(192.0.50.2)
Electrical(10.107.1.250)
Kresit-cse-uplink(192.0.20.2)
Kresit-aero-uplink(192.0.30.1)

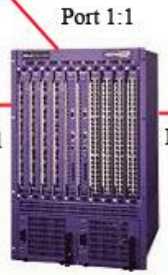
H8-CC (192.0.50.1)
H8-H3 (192.0.60.1)
Hostel6 (10.6.250.1)
Hostel7 (10.7.250.1)
Hostel8 (10.8.250.1)
Hostel9 (10.9.250.1)
Hostel1 (10.11.250.1)
Hostel12 (10.12.250.1)
Hostel13 (10.13.250.1)
Staffhostel (10.25.250.1)

Hostel 5 Patching Switch
192.0.60.3

Hostel 1 patching switch
192.0.40.3

AERO Extreme

BTC (10.124.1.250), CHE (10.102.1.250),
HSS (10.108.1.250), AERO(10.101.1.250),
CESE (10.118.1.250), CHEM(1030, 10.103.1.250),
CSRE (10.142.1.250), SINE(10.147.250.1),
AERO-CC (192.0.30.2), AERO-CSE (192.0.10.2),
EathScience (10.106.1.250)



CSE Extreme

CSE (10.105.1.250), IDC (10.113.1.250)
ACRE (10.141.1.250), DRDO (10.26.250.1)
MECH (10.110.1.250), RSIC (10.143.1.250)
CDEEP (10.146.1.250), CFDVS (10.144.1.250)
MATHS (10.109.1.250), Gate-jee (10.92.250.1)
Cse-cc-uplink (192.0.20.1), Cse-h3-uplink (192.0.40.2)
Cse-aero-uplink (192.0.10.1)

Hostel -3 Alpine

Sac (10.51.250.1)
H3-H8 (192.0.60.2)
Tansa (10.21.250.1)
H3-CSE (192.0.40.1)
Hostel1 (10.1.250.1)
Hostel2 (10.2.250.1)
Hostel3 (10.3.250.1)
Hostel4 (10.4.250.1)
Hostel5 (10.5.250.1)

Network Terms & Settings

- IP (Internet Protocol)
  - Identification of a computer in a network.
  - IIT Bombay IP allocation scheme:
    - General Pattern: 10.xx.yy.zz
    - xx : Hostel Number
    - yy & zz will indicate your Room Number
    - zz is last 2 digits of your Room Number
    - yy is remaining part of Room Number

Hostel 8, Room No. 54 : IP Address 10.8.0.54

Hostel 4, Room No. 270 : IP Address 10.4.2.70

- Detailed Info:
  http://web.iitb.ac.in/web/ip-allocation.php

Network Terms & Settings

- Subnet Mask
  - 255.255.0.0
- Gateways
  - At Individual Hostel level:
  - General pattern: 10.xx.250.1

  where xx: Hostel Number
- DNS (Domain Name Server)
  - Server that gives IP corresponding to a URL
  - 10.200.1.11

IITB Proxy Server (NETMON)

- Required to access anything outside the IIT campus, i.e. Internet.

- Internet browser connection settings:
  - Automatic: http://www.cc.iitb.ac.in/autoproxy.pac
  - Manual: Server: netmon.iitb.ac.in
  - Manual: Port: 80

SERVICES & FACILITIES @ INSTI

LDAP

- LDAP – Light Weight Directory Access Protocol
- It is like a Institute Electronic Identity.
- Every student/staff gets an institute LDAP account on joining (e.g.. 09D05004).
- User-id can be changed only once after 1st September.
- Please avoid selecting fancy uids like chunky007, buntythegreat …
- Used in authentication on all services provided by the Institute.

Central Accounts Management Portal (CAMP)

- CAMP – http://camp.iitb.ac.in/
- Used to modify, Password, UserID and Personal Details, of the LDAP account.
- Mail forwarding.
- Other LDAP account maintenance operations.

Institute Webmail (GPO)

- http://gpo.iitb.ac.in
- Login: using institute LDAP id (e.g. 09D05004)
- Email address: yourldapid@iitb.ac.in (09D05004@iitb.ac.in)
- Inbox size : 1 GB
- Other Interfaces:
  - http://imp.iitb.ac.in
  - http://iloha.iitb.ac.in/
  - http://hasty.iitb.ac.in

Institute Webmail (GPO)

- This service can also be accessed via Kmail, Pine, Thunderbird, Outlook Express etc. using:
- IMAP Service.
  - http://docs.iitb.ac.in/webmail.tutorial/imapfaq.html
- Mailing Lists – Used to send email to a particular group of users
  - http://lists.iitb.ac.in
  - Seminar, Programmers, Clubs, Matlab-users, etc.
- Do NOT reply to any phishing mails

  Computer Center NEVER asks for your password

Storage Facility (BIGHOME)

- URL: bighome.iitb.ac.in
- Storage Server
  - Can store your data and access from anywhere within the institute
  - Quota :- 500MB
  - Access:
    - FTP Clients
    - Mounting
- For Instructions and Information:

  http://www.cc.iitb.ac.in/faq/storagefaq.php

Personal Web Page

- Do the ftp login to 'bighome.iitb.ac.in' by using any ftp client
  - For Unix: gftp ; For Windows: any GUI FTP Tool
- Create 'public_html' folder in your homedir .
- Copy all web pages in public_html
- Change the permissions of both home directory and public_html directory to '755'. 'chmod 755‘
  - Through ftp clients you can change the file permissions/attributes
- http://homepages.iitb.ac.in/~userid will be URL for your homepage.

IITB FTP Repository

- URL: ftp://ftp.iitb.ac.in
- Stores common open-source softwares.
- To save your time and network bandwidth
- Linux/FreeBSD distributions
  - Fedora, Mandrake Linux, Debian, Redhat, Mandriva, Knoppix , etc.
- Various other softwares
  - Oracle, Scilab, Java, SSH clients, MPlayer etc.
- Licensed Softwares :
  - Matlab, Mathematica, Techplot, ANSYS

MSDNAA

- IITB – Microsoft Developer Network Academic Alliance
- Allows access to Licensed Microsoft Software to students.
- Free software and Operating Systems available for download: Windows XP, Windows Server 2003, Windows Vista, Visual Basic, Visual C++, .NET, SQL server, etc.

- Visit for details:

  http://msstore.iitb.ac.in/msdnaa/
  ftp://msstore.iitb.ac.in/
  Email: request.ms@iitb.ac.in

Wireless Networks & Newsgroups

- WiFi Networks available for use at major academic locations like MB, LT, SOM, Library etc.
- Proxy authentication required using LDAP
- For help in Configuration visit:

  http://www.cc.iitb.ac.in/wireless/index.php

- Newsgroups:
  - http://varta.iitb.ac.in/
  - Use LDAP id and password to login

Other Useful Academic Services

- Application Software Cell (ASC)
  - URL: http://asc.iitb.ac.in/
  - Academic Information and Management
- Moodle
  - URL: http://moodle.iitb.ac.in/
  - Academic Discussion Forum
- Online Fees Payment
  - http://www.iitb.ac.in/onlinepay/

Useful User IDs

- Institute General Secretaries

  GS Hostels : gsecha@iitb.ac.in
  GS Sports : gsecsports@iitb.ac.in

  GS Cultural : gseccult@iitb.ac.in

  GS Acad UG : gsecaaug@iitb.ac.in

  GS Acad PG : gsecaapg@iitb.ac.in

- Hostel Gsecs : gsech**@iitb.ac.in

  ** will the 2 digit hostel number.

- Hostel System Administrators : sysadh**@iitb.ac.in

  ** will the 2 digit hostel number.

IT Usage and Fine Policy

- http://www.cc.iitb.ac.in/cgi-bin/policy.cgi
- Internet access is provided STRICTLY for academic use.
- Please avoid unethical browsing, downloads from the internet.
- Fine will be imposed in the following cases:
  - Excessive Downloads
  - Bombarding :- Internal (within campus network), External
  - Email Spamming.
  - Damage to CC Equipment by Hostel Inmates (Racks, Locks, Switches, etc)

IT Usage and Fine Policy

- Malicious Activities
  - Packet Sniffing
  - Hacking
  - Password Snooping (Stealing)

- http://gymkhana.iitb.ac.in/~mlc/fine-policies.html

Lan Ban

- In hostel rooms during 12am to 7am
- No Lan Ban during vacations!

Computer Rooms in Hostels

- 24x7 internet access

- Follow Comp Room Rules strictly
- Contact your sysad/comp secy in case of any problems

Vendor Facility

- CC has a contract with vendor for supply and maintenance of student's and institute's hardware and software
- According to rate contract available at CC site, new hardware can be bought.

TROUBLESHOOTING

Things to be done in case of a Network Problem

- **Steps for checking physical connectivity:**

  - Check if LEDs are glowing in the place where network cable is plugged into your PC.
  - If they are not, check if the cable is plugged properly. Remove and replug it at both ends. One end is in your computer and other is in the wall jack.
  - If LED's are glowing, go to next step. If they are still not glowing, please register complaint with your hostel comp secy / sysad.

Things to be done in case of a Network Problem

- **If physical connectivity seems fine then go to the next section:**

  - Check if your IP address, subnet mask, gateway and DNS entries are correct
  - Type the following command in command prompt/ terminal for finding your IP on the machine:
    - On windows: "ipconfig". This command shows the machines IP address, subnet mask and gateway.
    - On Linux: Type "/sbin/ifconfig“

Things to be done in case of a Network Problem

- Try to ping few machines in your building using the command prompt/ terminal. The command is: "ping x.x.x.x" where x.x.x.x is the IP address.
- If that succeeds, try to ping the Main switch of your hostel . The IP address of the switch will be 10.<hostel no>.250.1
- If all is done but still you are unable to connect to the network, please contact your hostel SysAd or Comp Secy

Whom to Contact?

- For networking issues:
  - Hostel or Department Sysads
- For other issues:
  - http://help.cc.iitb.ac.in/
  - For urgent queries you can come to CC HelpDesk
    (SIC 101, KRESIT 4:30 pm - 5:30 pm Except Thu)

LINUX & OPEN SOURCE

LINUX

- Operating System just like Windows
- Robust, Stable, Open Source, Safe and Secure.
- No viruses – well almost true

- IIT Bombay encourages you to use Linux
  (Almost all labs use Linux Systems)
- Must attend Prabhat – A workshop on Linux

Distributions (DISTROS)

- Ubuntu
  - A Debian based distro. Currently quite popular in Linux world especially among newbie.
- Fedora
  - A product of Redhat.
- SuSE
  - Easy to use distro ideal for personal computers.
- Mandrake
  - Another distro for Linux newbie.
- Gentoo and Debian
  - For advanced users
- Knoppix
  - Run from a CD
  - No need to install
  - Best if you want to try

Open Source

- Why use proprietary software when better alternative is available freely.
- More Power
  - The code is open and you can see it, use it, change it, learn from it and contribute to it WITHOUT ANY COST
  - Evolved by efforts of thousands of developers worldwide, so caters to everyone's problem
- Linux and Other Open Source Software are owned by no one and freely available.

Open Source Software

- Mozilla Firefox – The dominant browser in insti. Much more friendly and powerful than IE and other browsers
- Mozilla Thunderbird – Email client
- Mplayer – Plays (almost) all the movie/audio files
- VLC – Another media player, better with streaming
- Gaim (now Pidgin) – Yahoo, Gtalk, MSN.. All messengers in one
- Amarok – Equivalent of iTunes, Window Media Player

Open Source Software

- Open office – Open Source community's answer to MS office
- More techie: Apache, Java, GIMP, MySQL, PHP, vi, emacs, python, Notepad++, wamp, vnc, wireshark, dia, wordweb

- Most of them available for Windows as well
- Many add-ons available for these, e.g. for Firefox

Firefox

Indian Institute of Technology, Bombay - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://www.iitb.ac.in/
Red Hat, Inc. Red Hat Network Support Shop Products Training
Indian Institute of Technology, Bombay
भारतीय प्रौद्योगिकी संस्थान, मुम्बई
IIT Bombay
Search
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हिन्दी संस्करण (Hindi Version)
About IITB
Admissions
Academics
R&D
Outreach
Entrepreneurship
Students
Alumni
Industrial Design Centre, Entrance
Be the change you want to see in the world - Mahatma Gandhi
News
IITB to celebrate Golden Jubilee from September 2007 to March 2009
Help us Write IIT-Bombay's History:
IIT Bombay invites you to participate in a History Survey...
Avoiding Cracking of Paint Films:
Manufacturers and users often face a vexing problem of 'cracking' of applied emulsion films....
Events
MDP on R&D Management
TFT on MOT
NWPE 2007
Seminars/Colloquiums
Conferences/Workshops
Other Links
Fellowships & Internships
R&D Spectrum
Check Webmail
Internal Links
Central Library
Facilities
Campus Placements
Faculty Recruitment
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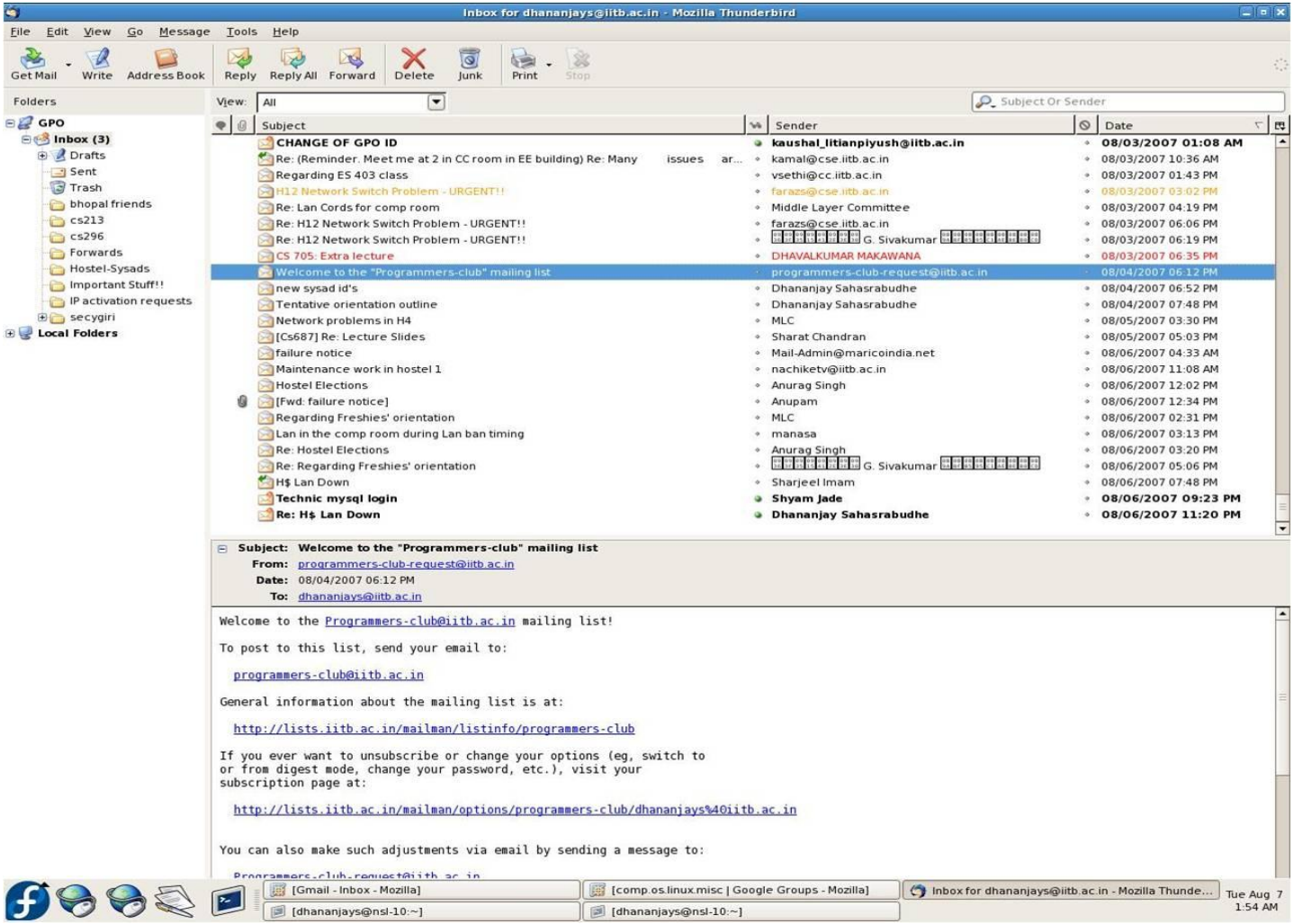
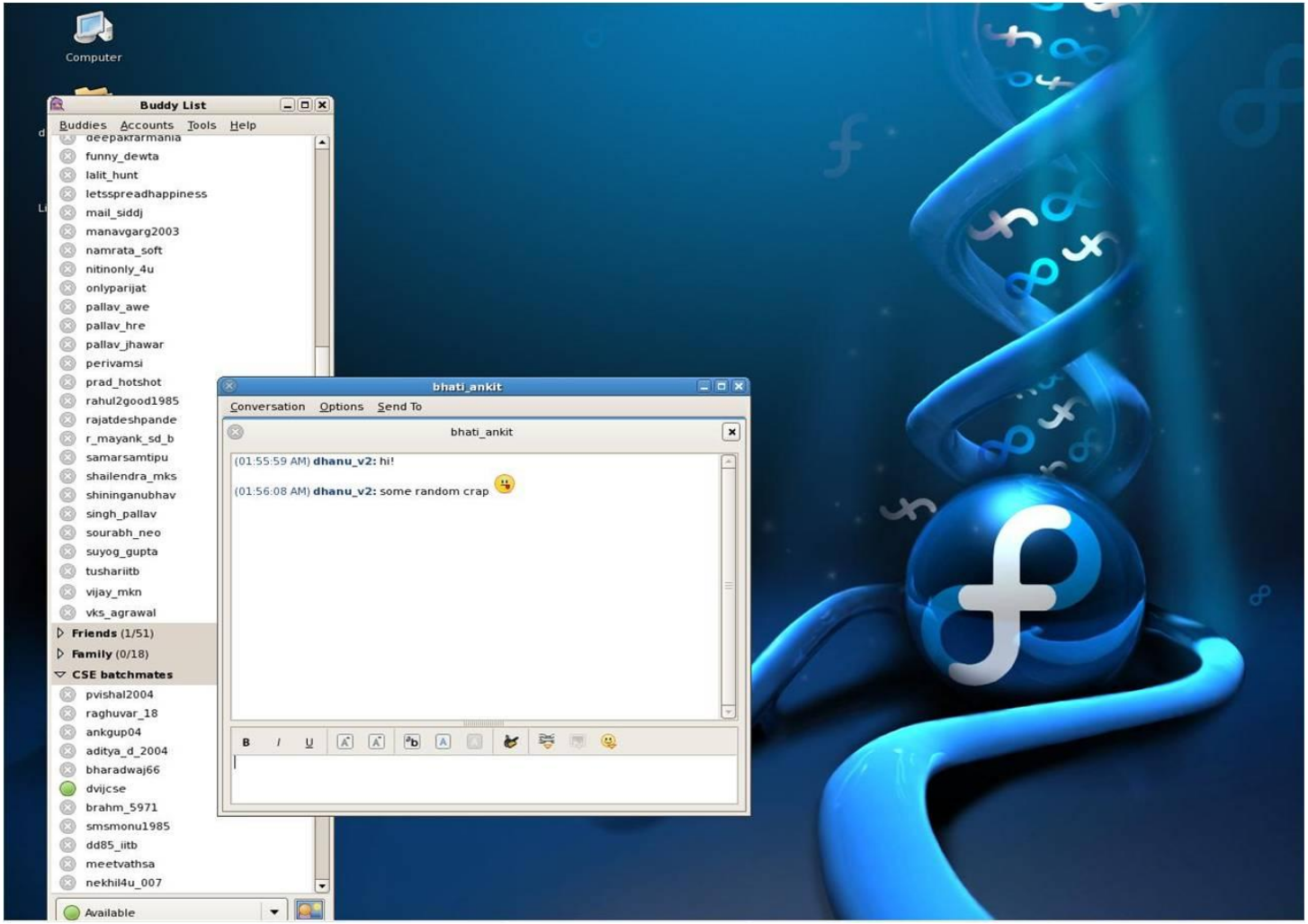
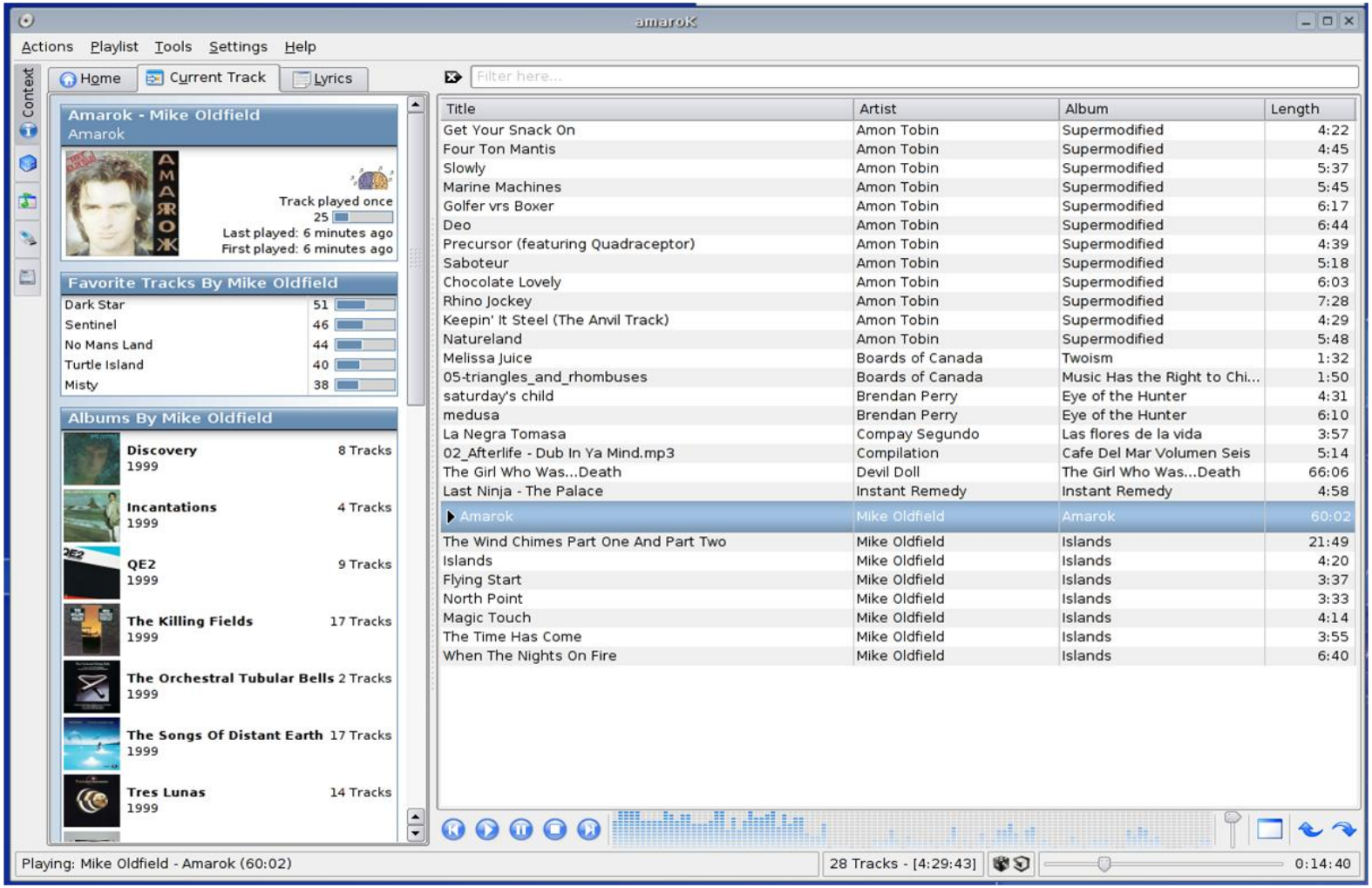
Thunderbird



Gaim (Now Pidgin)



Amarok


amaroK
Actions Playlist Tools Settings Help
Context
Home
Current Track
Lyrics
Filter here...
Amarok - Mike Oldfield
Amarok
Track played once
25
Last played: 6 minutes ago
First played: 6 minutes ago
Favorite Tracks By Mike Oldfield
Dark Star 51
Sentinel 46
No Mans Land 44
Turtle Island 40
Misty 38
Albums By Mike Oldfield
Discovery 1999 8 Tracks
Incantations 1999 4 Tracks
QE2 1999 9 Tracks
The Killing Fields 1999 17 Tracks
The Orchestral Tubular Bells 1999 2 Tracks
The Songs Of Distant Earth 1999 17 Tracks
Tres Lunas 1999 14 Tracks
Title Artist Album Length
Get Your Snack On Amon Tobin Supermodified 4:22
Four Ton Mantis Amon Tobin Supermodified 4:45
Slowly Amon Tobin Supermodified 5:37
Marine Machines Amon Tobin Supermodified 5:45
Golfer vrs Boxer Amon Tobin Supermodified 6:17
Deo Amon Tobin Supermodified 6:44
Precursor (featuring Quadraceptor) Amon Tobin Supermodified 4:39
Saboteur Amon Tobin Supermodified 5:18
Chocolate Lovely Amon Tobin Supermodified 6:03
Rhino Jockey Amon Tobin Supermodified 7:28
Keepin' It Steel (The Anvil Track) Amon Tobin Supermodified 4:29
Natureland Amon Tobin Supermodified 5:48
Melissa Juice Boards of Canada Twoism 1:32
05-triangles_and_rhombuses Boards of Canada Music Has the Right to Chi... 1:50
saturday's child Brendan Perry Eye of the Hunter 4:31
medusa Brendan Perry Eye of the Hunter 6:10
La Negra Tomasa Compay Segundo Las flores de la vida 3:57
02_Afterlife - Dub In Ya Mind.mp3 Compilation Cafe Del Mar Volumen Seis 5:14
The Girl Who Was...Death Devil Doll The Girl Who Was...Death 66:06
Last Ninja - The Palace Instant Remedy Instant Remedy 4:58
Amarok Mike Oldfield Amarok 60:02
The Wind Chimes Part One And Part Two Mike Oldfield Islands 21:49
Islands Mike Oldfield Islands 4:20
Flying Start Mike Oldfield Islands 3:37
North Point Mike Oldfield Islands 3:33
Magic Touch Mike Oldfield Islands 4:14
The Time Has Come Mike Oldfield Islands 3:55
When The Nights On Fire Mike Oldfield Islands 6:40
Playing: Mike Oldfield - Amarok (60:02)
28 Tracks - [4:29:43]
0:14:40

WINDOWS

Windows

- A friendly operating system but with many trade-offs:
  - Less power
  - Less flexibility
  - Requires license. Free for IIT students ☺
  - Less Security ☹
- Security: Computers get infected by malicious software, virus etc. and try to spread across LAN.
- It is YOUR responsibility to secure your system and also not to harm other users knowingly or unknowingly

Firewall & Antivirus

- Mandatory for Windows system to have a:
  - Properly configured firewall
  - Up-to-date, regularly running Antivirus
  - Up-to-date Anti-Spyware
- Firewall: Only allow those process to access the network whose function you know. DON'T allow any unfamiliar process
  - Sygate, Zone-alarm(free firewalls)
- Antivirus: Run update or manually update (at least twice a week) and run Complete Scan daily
  - Norton, AVG(free edition), McAfee, Avast(freeware), Clam Win(freeware)
  - Anti-Spyware bundled with Antivirus in many products

Possible Offences

- Bombarding – Flooding the network with many request at hostel or institute level, greatly slowing down the network for peers
- Email spam – Any spam launched manually or by virus attack
- Damage to CC equipment
- Malicious Activity
  - Packet Sniffing
  - Hacking
  - Password Snooping (Stealing)
- Read CC and MLC website for details

Important Links

- CC Website: http://www.cc.iitb.ac.in/
- Internal IITB WEB Server: http://web.iitb.ac.in/
- MLC Website: http://gymkhana.iitb.ac.in/~mlc/

Questions???

THANK YOU ☺

Udit Gupta
Sravan Kumar
Chirag Patel