PROFESSIONAL ISSUES
Setting the Agenda

MICHAEL FOURMAN

No man is an island…

- The social, economic, moral, and legal frameworks that shape the software ecosystem.

- Architectures, operating systems, programming languages, applications, companies and individuals rise and fall.

- Society guarantees some rights, and imposes many responsibilities and obligations.

- Non-technical forces will play a role in shaping what you can achieve.

- To understand some of these forces may be helpful.

Government and Law

1 LAW AND GOVERNMENT
1.1 WHAT IS THE LAW?
1.2 CRIMINAL LAW AND CIVIL LAW
1.3 WHERE DOES THE LAW COME FROM?
1.4 THE LEGISLATIVE PROCESS IN THE UK
1.5 THE LEGISLATIVE PROCESS IN OTHER COUNTRIES
1.6 THE LAW ACROSS BORDERS

Computing Profession

2 THE COMPUTING PROFESSION
2.1 THE CONCEPT OF A PROFESSION
2.2 ROYAL CHARTERS
2.3 PROFESSIONAL CONDUCT
2.4 EDUCATION
2.5 THE ADVANCEMENT OF KNOWLEDGE
2.6 CONTINUING PROFESSIONAL DEVELOPMENT
2.7 REPRESENTING THE PROFESSION
2.8 MEMBERSHIP GRADES
2.9 RESERVATION OF TITLE AND FUNCTION

Companies and Organisations

3 WHAT IS AN ORGANISATION?
3.1 THE ROLE OF ORGANISATIONS
3.2 COMMERCIAL ORGANISATIONS
3.3 LIMITED COMPANIES
3.4 SETTING UP A COMPANY
3.5 THE CONSTITUTION OF A LIMITED COMPANY
3.6 DIRECTORS
3.7 TAKEOVERS, MERGERS AND OUTSOURCING
3.8 NON-COMMERCIAL BODIES

4 STRUCTURE AND MANAGEMENT OF ORGANISATIONS
4.1 ORGANISATIONAL MODELS
4.2 STRUCTURING PRINCIPLES
4.3 DEPTH OF STRUCTURE
4.4 CENTRALISATION
4.5 SETTING UP A STRUCTURE IN PRACTICE
4.6 JOB DESIGN

Finance Accounting and Investment

5 FINANCING A START-UP COMPANY
5.1 WHY CAPITAL IS NEEDED
5.2 THE BUSINESS PLAN
5.3 SOURCES OF FINANCE
5.4 GEARING

6 FINANCIAL ACCOUNTING
6.1 DISCLOSURE REQUIREMENTS
6.2 THE BALANCE SHEET
6.3 THE PROFIT AND LOSS ACCOUNT
6.4 THE CASH FLOW STATEMENT
6.5 THE OVERALL PICTURE

7 MANAGEMENT ACCOUNTING
7.1 PLANNING AND MANAGEMENT INFORMATION
7.2 BUDGETS AND OVERHEADS
7.3 COST OF LABOUR
7.4 ALLOCATION OF OVERHEADS
7.5 CASH FLOW FORECAST

8 INVESTMENT APPRAISAL
8.1 INVESTMENT PROPOSALS
8.2 THE TIME VALUE OF MONEY
8.3 APPLYING DCF TO A SIMPLE INVESTMENT PROJECT
8.4 ASSESSMENT OF A SOFTWARE PRODUCT PROPOSAL
8.5 PITFALLS OF DCF

Human Resources and Discrimination

9 HUMAN RESOURCES ISSUES
9.1 WHAT ARE HUMAN RESOURCES?
9.2 THE LEGAL CONTEXT
9.3 RECRUITMENT AND SELECTION
9.4 STAFF TRAINING AND DEVELOPMENT
9.5 REMUNERATION POLICIES AND JOB EVALUATION
9.6 APPRAISAL SCHEMES
9.7 REDUNDANCY, DISMISSAL AND GRIEVANCE PROCEDURES
9.8 CONTRACTS OF EMPLOYMENT
9.9 HUMAN RESOURCE PLANNING

10 ANTI-DISCRIMINATION LEGISLATION
10.1 THE DEVELOPMENT OF ANTI-DISCRIMINATION LEGISLATION
10.2 WHAT IS DISCRIMINATION?
10.3 DISCRIMINATION ON GROUNDS OF SEX
10.4 DISCRIMINATION ON RACIAL GROUNDS
10.5 DISCRIMINATION ON GROUNDS OF DISABILITY
10.6 DISCRIMINATION ON GROUNDS OF AGE
10.7 AVOIDING DISCRIMINATION

IPR, Software Contracts, Data Protection, Privacy

11 INTELLECTUAL PROPERTY RIGHTS
11.1 INTELLECTUAL PROPERTY
11.2 COPYRIGHT
11.3 EXAMPLES OF COPYRIGHT CASES INVOLVING SOFTWARE
11.4 CONFIDENTIAL INFORMATION
11.5 PATENTS
11.6 TRADE MARKS
11.7 DOMAIN NAMES

12 SOFTWARE CONTRACTS AND LICENCES
12.1 WHAT IS A CONTRACT?
12.2 LICENCE AGREEMENTS
12.3 OUTSOURCING
12.4 CONTRACTS FOR BESPOKE SOFTWARE
12.5 CONTRACTS FOR CONSULTANCY AND CONTRACT HIRE
12.6 LIABILITY FOR DEFECTIVE SOFTWARE
12.7 HEALTH AND SAFETY

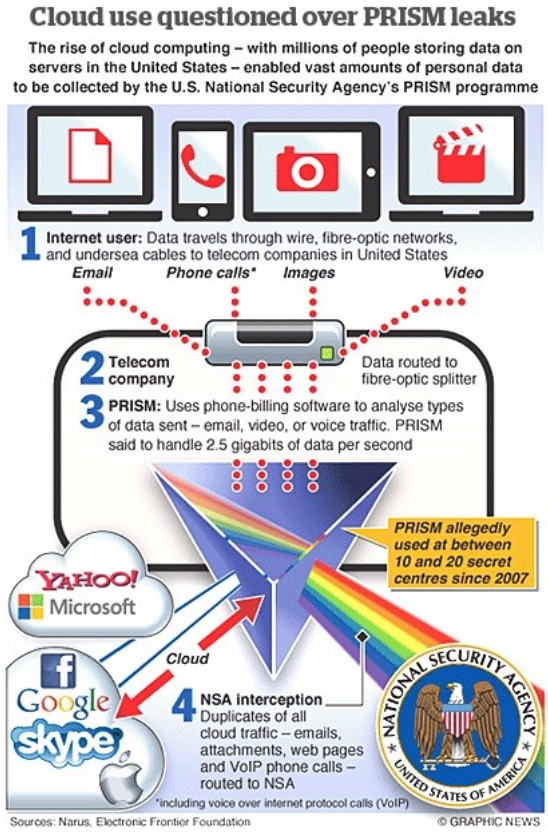
13 DATA PROTECTION, PRIVACY AND FREEDOM OF INFORMATION
13.1 BACKGROUND
13.2 DATA PROTECTION
13.3 PRIVACY
13.4 FREEDOM OF INFORMATION

The Internet, Defamation, Pornography, Spam

14 INTERNET ISSUES
14.1 THE EFFECTS OF THE INTERNET
14.2 INTERNET SERVICE PROVIDERS
14.3 THE LAW ACROSS NATIONAL BOUNDARIES
14.4 DEFAMATION
14.5 PORNOGRAPHY
14.6 SPAM
14.7 ECOMMERCE REGULATIONS

Computer Misuse and Fraud

15 COMPUTER MISUSE
15.1 THE PROBLEM
15.2 THE COMPUTER MISUSE ACT 1990
15.3 AMENDMENTS TO THE ACT
15.4 OPERATION OF THE ACT
15.5 COMPUTER FRAUD



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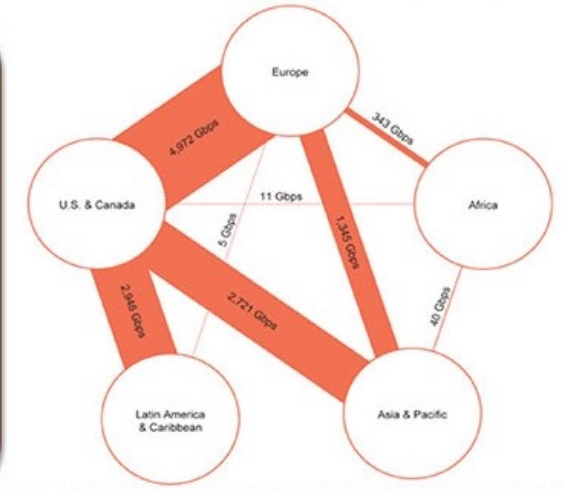
(TS//SI//NF) Introduction

U.S. as World's Telecommunications Backbone

- Much of the world's communications flow through the U.S.
- A target's phone call, e-mail or chat will take the **cheapest** path, **not the physically most direct** path – you can't always predict the path.
- Your target's communications could easily be flowing into and through the U.S.



International Internet Regional Bandwidth Capacity in 2011
Source: Telegeography Research

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(TS//SI//NF) PRISM Collection Details

Current Providers

- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PalTalk
- YouTube
- Skype
- AOL
- Apple

What Will You Receive in Collection (Surveillance and Stored Comms)?
It varies by provider. In general:

- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing
- Notifications of target activity – logins, etc.
- Online Social Networking details
- **Special Requests**

Complete list and details on PRISM web page:
Go PRISMFAA

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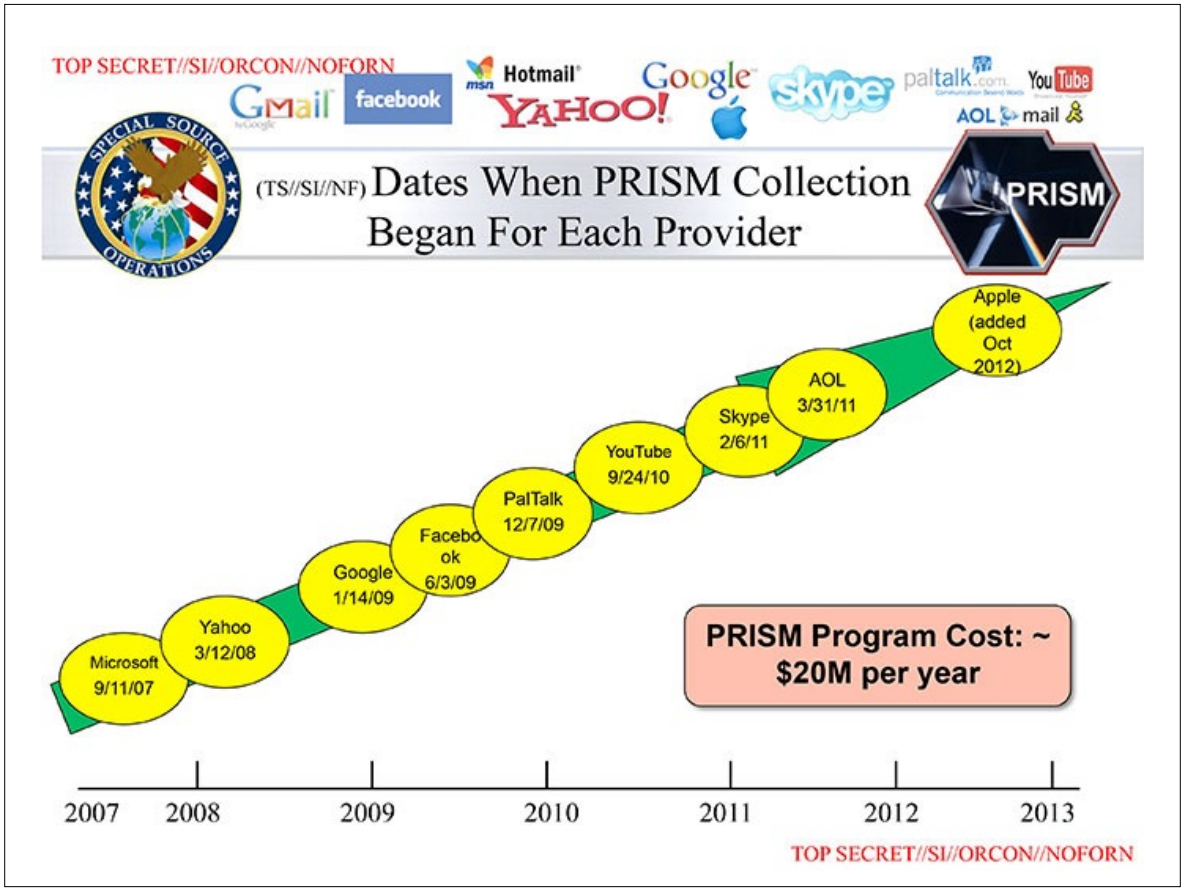
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Gmail
facebook
Hotmail
YAHOO!
Google
skype
paltalk.com
YouTube
AOL mail
SPECIAL SOURCE OPERATIONS
(TS//SI//NF) Dates When PRISM Collection Began For Each Provider
PRISM
Microsoft 9/11/07
Yahoo 3/12/08
Google 1/14/09
Facebook 6/3/09
PalTalk 12/7/09
YouTube 9/24/10
Skype 2/6/11
AOL 3/31/11
Apple (added Oct 2012)
PRISM Program Cost: ~ $20M per year
2007
2008
2009
2010
2011
2012
2013
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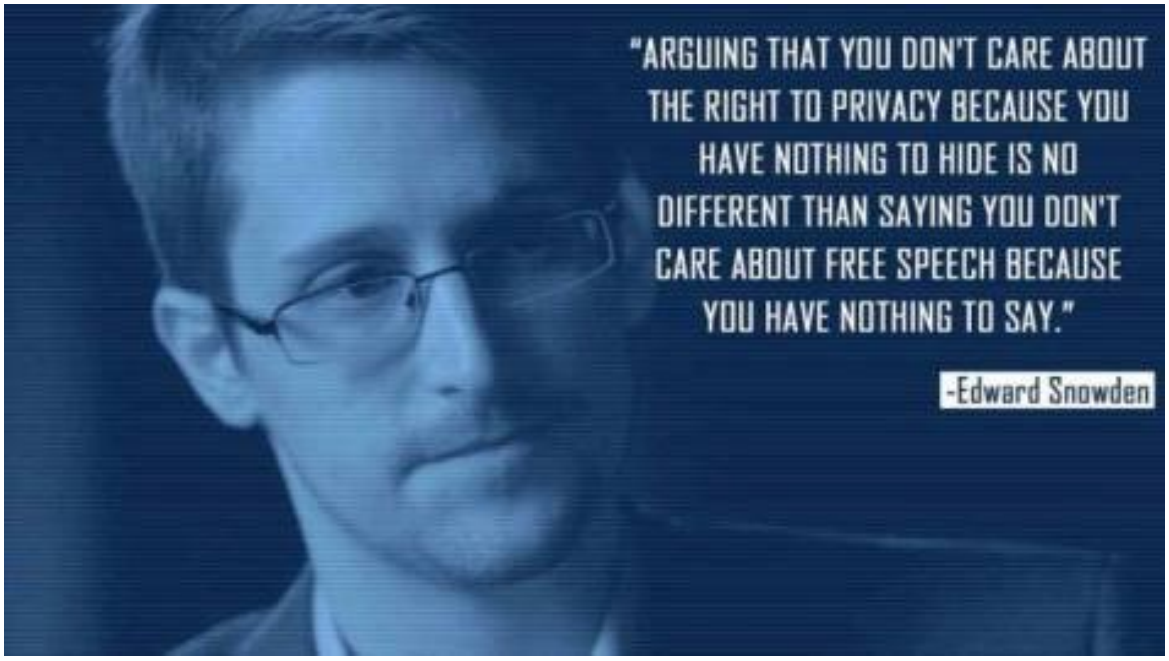
"ARGUING THAT YOU DON'T CARE ABOUT THE RIGHT TO PRIVACY BECAUSE YOU HAVE NOTHING TO HIDE IS NO DIFFERENT THAN SAYING YOU DON'T CARE ABOUT FREE SPEECH BECAUSE YOU HAVE NOTHING TO SAY."
-Edward Snowden

Straw Poll

Government and Law	**25**	
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The Digital Divide	**20**	

The Startup Manifesto

http://www.coadec.com/wp-content/uploads/2014/09/Startup-Manifesto.pdf