OSS Healthcare IT

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Ripple Foundation
openEHR Foundation
ADOC Software Development

WARNING: This is a Microsoft Free Presentation

Libre

- Free, as in Liberty

- Liberty
    - Freedom from
        - Arbitrary control
        - External rules
        - Restriction
    - According to choice

Open Source Software/System

- Non-proprietary

- Source code is publicly available for

  - Distribution

  - Review

  - Changes

- Enable to modify or create derivative works without having to start from scratch

Approach

- Discover/create
- Justify/validate
- Share/pollinate

"To me programming is more than an important practical art. It is also a gigantic undertaking in the foundations of knowledge"

Grace Hopper

Licenses

- ASLv2 => Permissive
- MIT => Permissive
- GPL => redistribute/modify as GPL
- LGPL => only modified as LGPL
- MPL => as LGPL
- BSD-3 => similar to ASLv2
- BSD-3 + Patent => FaceBook React

At Work

- Internet – most Web sites and applications are based on Open Source (Linux, Apache, PHP etc.)

- Networking equipment: Netgear, Linksys and other product based on Linux.

- Smartphones: Most are Linux based (or BSD) and use Open Source programming language to implement their services

- Business applications: Document Management, ERP, CRMs etc.

- GPS: many are Linux based (TomTom for example)

- Embedded Systems, open hardware: Arduino, Rasperry etc.

- Linux and GNU tools (programming languages and utilities)

- Bind (the domain name service used on the internet)

- Sendmail (the mail service used to exchange emails in the Internet)

- Apache (Web Server and middleware)

- RDBMS: MySQL, PostgreSQL

- Asterisk (VoIP PBX)

- Firefox and Thunderbird (web browser and mail client)

Quality/Security

- Question to Linus

  - When will the next version of Linux be released?
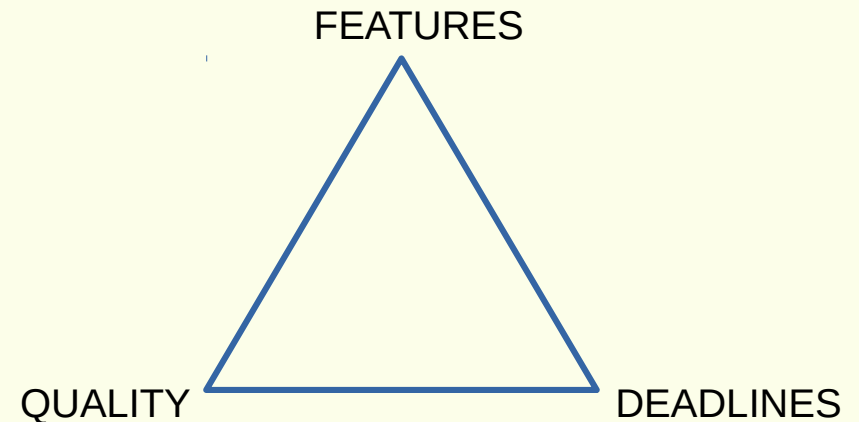
  - When it's done!

- Linus' Law: Why do people do things?

  1. To survive
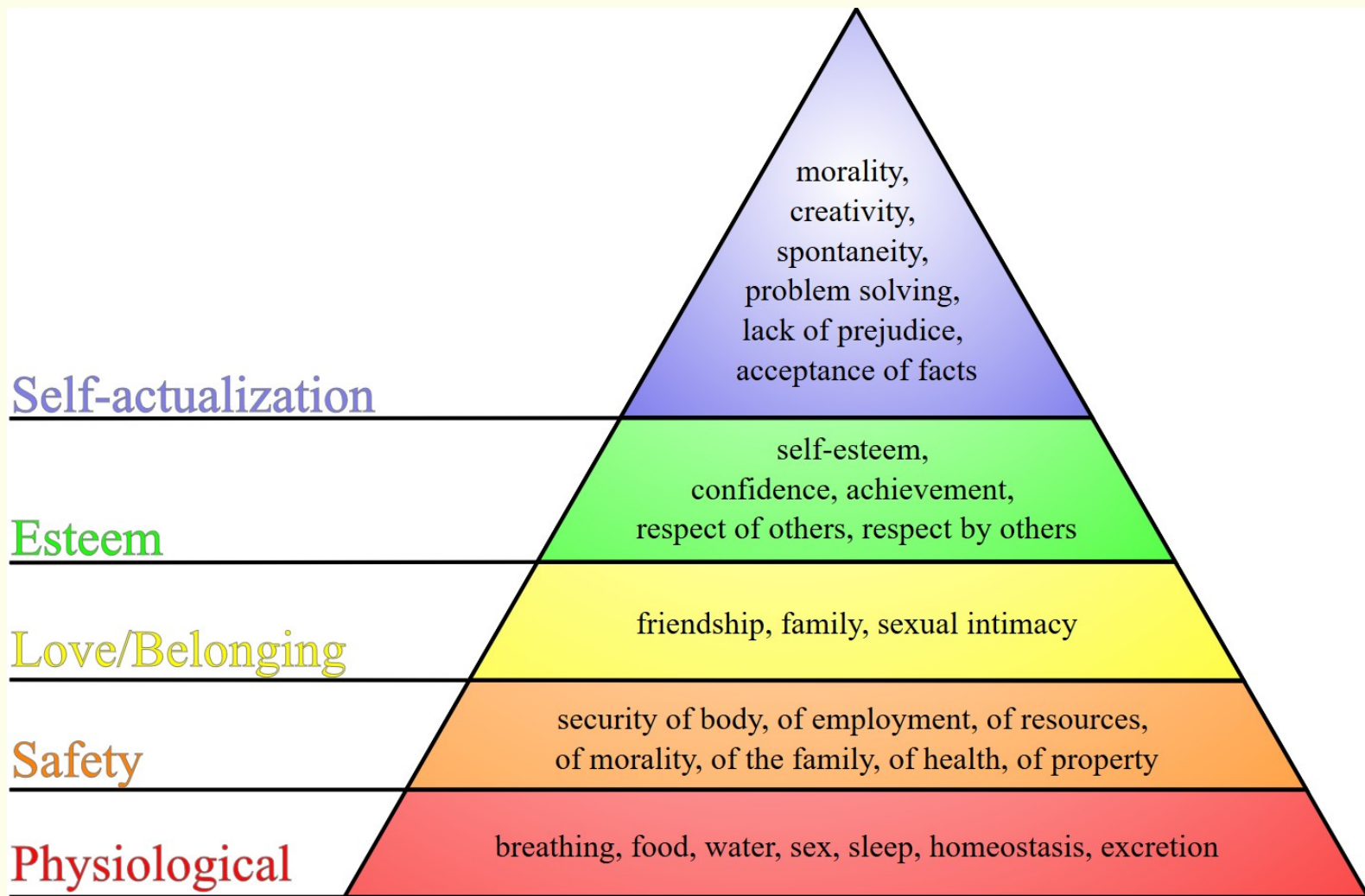
  2. To have a social life

  3. For Fun

- Security

  - peer code reviews (many eyeballs)

  - broad range of tests and trials in numerous contexts and, well,

  - DIY on-the-spot fix

  - Formal and compulsory security assessment.

Eric Raymond:
Three essential expectations

FEATURES

QUALITY   DEADLINES

Personal Achievement

Stake Holders

- Who take the decision? Who write the checks? Who will operate?
    - National / Regional Health Authorities
    - Health Care Professionals (MD, Nurses)
    - Patients & relatives
    - Healthcare Facilities Management (CFO)
    - CIO, CMIO
    - Developers/Integrator, System Admin, DBA

Experience Trail

- Commercial Application:
    - $$$++
    - proprietary data format
    - non computable data set (f.e. ADOBE XFA)
- Open Source: GnuMed, PatientOS
    - SOAP, Forms oriented
    - Data structure hard to modify
- HL7 CDA or openEHR
    - No functional reference implementation

Open Source openEHR

- Non Open System

  - Business model: Resell data

  - Keep the market captive (e.g. enforce proprietary artifacts)

  - Lobbying (f.e. cost of compliance)

  - Privacy (f.e. Droit a l'oubli)

  - Fake collaborative economy

    - The benefits are going to VCs and Share Holders

  => Profit, not Patient

- Patient's data ownership

- Mutualization of knowledge and effort

- Community funded

- Durability (no planned obsolescence)

Epic Failures

- France DMP

    - Coordinate: GP, Specialist, Hospital (3 lines model)

    - Technocratic approach (hospital driven)

    - Non implication of Physicians (resistance)

    - Complicated access rules

    - Incompatible software (50% GPs)

- Healthcare.gov

    - > 55 contractors

    - Lawyers and politicians

    - Secret code bases

        - Not tested rigorously

        - Flaws could not be discussed