Competition, Open Systems and Data Liberation

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American Antitrust Institute
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An Engineer’s-Eye View of Systems Competition
For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled.

-Richard Feynman
Software as System

How an engineer views applications
/* Getting dag nodes for roots. */

/* Set *NODE_P to a freshly opened dag node referring to the root
directory of ROOT, as part of TRAIL. */
static svn_error_t *
root_node(dag_node_t **node_p,
    svn_fs_root_t *root,
    trail_t *trail,
    apr_pool_t *pool)
{
    base_root_data_t *brd = root->fsap_data;

    if (!root->is_txn_root)
    {
        /* It's a revision root, so we already have its root directory
         * opened. */
        *node_p = svn_fs_base__dag_dup(brd->root_dir, pool);
        return SVN_NO_ERROR;
    }
    else
    {
        /* It's a transaction root. Open a fresh copy. */
        return svn_fs_base__dag_txn_root(node_p, root->fs, root->txn,
                                         trail, pool);
    }
}
Software as System

How an engineer views applications
Conceptualizing Software

Designing, building, and testing
Competitive Software

Attracting and retaining users
### SOCIAL PROGRAMME

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Price (EUR)</th>
<th>/person(s)</th>
<th>incl. in congress fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Ceremony and a concert by “Werner Bros”, 16 June</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accompanying person tour, 16 June</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Reception hosted by the City of Jyväskylä, 17 June</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alvar Aalto-excursion, 18 June</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing Ceremony and Finnish evening, 19 June</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing Ceremony and Finnish evening for acc.person</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4. HOTEL DEPOSIT

All the hotels request a deposit of one night’s room rate in advance. Deposit is to be paid at the time of the registration. The room rates are listed below in the accommodation section.

**TOTAL EUR**

### 5. PAYMENT

All fees must be paid in euros (EUR) by using one of the following means:

- [ ] 1) By money transfer to the following bank account: (Please fill in the account number IN FULL.)

**Bank:** Tampereen Seudun Osuuspankki, P.O.Box 30, 33101 Tampere, Finland (with OKO Bank, Helsinki, Finland)

**Account holder:** European Music Therapy Congress

**Reference:** “Music Therapy” and your name

**Swift address:** OKOYFIHH **IBAN number:** FI8657300820231963 (for money transfers from EU-countries only)

**Account number:** 573008-2231963 (Please attach a copy of the receipt to the registration form.)

- [ ] 2) By one of the following credit cards:

  - [ ] VISA  
  - [ ] MasterCard  
  - [ ] EUROCARD

**Card Number:**

**Expiry date:**

**CVV/CVC Number:**

**Name of the cardholder:**

**Cardholder’s signature:**

### 6. ACCOMMODATION

Prices are per room per night, including breakfast and VAT.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Single</th>
<th>Double</th>
<th>Triple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scandic Hotel Jyväskylä</td>
<td>110 EUR</td>
<td>134 EUR</td>
<td>60 EUR</td>
</tr>
<tr>
<td>Cumulus Jyväskylä</td>
<td>102 EUR</td>
<td>122 EUR</td>
<td>52 EUR</td>
</tr>
<tr>
<td>Finlandia Hotel Alba</td>
<td>74 EUR</td>
<td>90 EUR</td>
<td>65 EUR</td>
</tr>
<tr>
<td>Hotel Milton</td>
<td>65 EUR</td>
<td>85 EUR</td>
<td>60 EUR</td>
</tr>
<tr>
<td>Summer Hotel Amis</td>
<td>45 EUR</td>
<td>60 EUR</td>
<td>60 EUR</td>
</tr>
<tr>
<td>Summer Hotel Rentukka</td>
<td>37 EUR</td>
<td>52 EUR</td>
<td>69 EUR</td>
</tr>
</tbody>
</table>

**Date of arrival:**

**Date of departure:**

**Late arrival, after 6 p.m.**

**Share room with:**
plans@tripit.com

The best way to **organize** and **share** your travel plans

Just forward your travel confirmation emails to: plans@tripit.com

1 **Build your itinerary**

Email TripIt your travel plans—airline, hotel and more—it doesn't matter where you book.

2 **Get Organized**

TripIt organizes your plans in a master travel itinerary that's easy to share and access.

3 **Stay informed**

With TripIt it's easy to access and share itineraries—online or from your mobile device.
Competitive Software

Attracting and retaining users
On the internet, the cost of distribution is fast approaching zero
Competition Tradeoffs

Intra and inter-system competition
The nice thing about standards is that there are so many to choose from.

- Andrew S. Tannenbaum
Competition Tradeoffs

Intra and inter-system competition
Data Liberation
How do you be big without being evil? We don't trap end users. So if you don't like Google, if for whatever reason we do a bad job for you, we make it easy for you to move to our competitor.

-Eric Schmidt
Make it Easy for Users to Change

- The “Data Liberation Front” is a team of engineers building data export functionality into Google products

<table>
<thead>
<tr>
<th>Product</th>
<th>Export Formats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Analytics</td>
<td>PDF, CSV, XML, TSV</td>
</tr>
<tr>
<td>Blogger</td>
<td>RSS, Atom</td>
</tr>
<tr>
<td>Google Calendar Beta</td>
<td>XML, iCal</td>
</tr>
<tr>
<td>Google Checkout</td>
<td>CSV</td>
</tr>
<tr>
<td>Google Docs</td>
<td>HTML, Word, PDF, RTF, OpenOffice, Text, CSV, Excel, Powerpoint</td>
</tr>
<tr>
<td>Google Finance Beta</td>
<td>OFX</td>
</tr>
<tr>
<td>Gmail Beta</td>
<td>POP, IMAP</td>
</tr>
<tr>
<td>iGoogle</td>
<td>CSV</td>
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<tr>
<td>Google Groups</td>
<td>GadgetTabML</td>
</tr>
<tr>
<td>Google Notebook</td>
<td>HTML</td>
</tr>
<tr>
<td>Google Reader Beta</td>
<td>OPML</td>
</tr>
<tr>
<td>Google Talk</td>
<td>XMPP</td>
</tr>
<tr>
<td>YouTube</td>
<td>MP4 (Currently limited basis)</td>
</tr>
<tr>
<td>Web History</td>
<td>RSS</td>
</tr>
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</table>
Users own the data they store in any of Google's products. Our team's goal is to give users greater control by making it easier for them to move data in and out.
Open Systems
The Internet is an Open System That Played a Big Role in Google’s Rise to Success
User Choice is Important
On the Internet, Closed Systems are Vulnerable
The Days of Standalone Systems are Coming to an End
On the Internet, Conventional Wisdom is Dangerous
And I Didn’t Even Touch on Open Source

(But I think it’s going to play an increasingly larger role)
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