The third worst poetry in the Universe

"Oh freddled grunthugly,
Thy micturations are to me
As plurdel gabbleblotchits on a lurgid bee.
Groop, I implore thee, my foonting turlingdromes,
And hooptiously drangle me with crinkly bindlewurdles,
Or I will rend thee in the gobberwarts
With my blurglecruncheon, see if I don't!"

Prostetnic Vogon Jeltz
Zaark, An Erlang Themed Voyage into VOIP and Messaging
The Company

- Company based in Stockholm (Uppsala office)
- ISV (Independent Software Vendor)
- Founded 2009
- Privately held
- Extensive domain experience
- Modular, Scalable, Reliable solution
- Open Source + Proprietary IP
Highlights

• Carrier Grade, platform agnostic
• Global, Scalable Infrastructure
• PSTN & VoIP calls
• Rich Messaging
• Encrypted communication
• SDK or White Label clients
• In-app purchase or web payment solution
• Multiple interconnect agreements

  Call rates 10-15% under Skype
Where it all started: Plingm

- Plingm released as B2C application to end users
- Plingm
  - 2 million customers Globally
  - Strong user groups in the middle east
  - High global user-rating!
Scandinavian Airline Systems (SAS)

• Objective
  • Customer engagement
  • Deploying VoIP and Messaging app using Eurobonus Points as currency

• Solution
  • Zaark delivers SAS branded client based on Zaark’s white label client
  • Integration with Eurobonus system
  • Branded web payment service

• Benefit
  • SAS can launch a VoIP app in very short time
Ttrumpet

• Objective
  • Add VoiP and Messaging to existing app

• Solution
  • Integrate Zaark SDK

• Benefit
  • Operator was able to add VoIP support without prior knowledge of the technology in a few weeks.
Technology
SDK features

- Uniform iOS and Android code base
- Support for multiple devices
- Address book integration
- VoIP with SIP online
- PSTN out
- Rich IM
- Seamless APNS/GCM support
- Cross vendor app connectivity
VoIP features

• Support for multiple devices
• SIP online
• External push support
IM features

- Support for multiple devices
- P2P and MUC
- Delivery reports
- Time limited archiving
- Message lifetime and revoke mechanisms
- Attachments
  - Position
  - Files (audio, video, photos, vcard, IM)
  - Emoticons
- Contact management
- Presence
Global Network

• Data centers
  – Stockholm
  – Johannesburg
  – More to come

• Cloud (AWS)
Scaling

• **Horizontal Scaling**
  - Virtualization where applicable
  - Add more resources when needed by adding more instances

• **Geographical Scaling**
  - Add resources dynamically in cloud and data centers
  - Add resources where the customer base grows
  - Dynamically control resources after patterns
High Availability

• Build away *Single Points of Failures*

• Active/Passive Hot-Standby

• Load Balancing
  – XMPP clusters
  – Application servers

• Multi-AZ Deployment in the cloud and in data centers
The stack (open source, proprietary mix)

- **OpenSIPS (PHP)**
  - SIP signalling
  - CDR generation
  - Call control
- **Asterisk**
  - Voice validation
- **Proprietary JAVA/PHP**
  - CRM
  - Reporting
- **PHP**
  - APNS/GCM
  - Address book
  - SMS
  - Voice Validation
  - Social integration
- **MySQL**
  - hot standby
- **CouchBase**
  - speed layer
The stack (oh, yes some Erlang)

- Mongoose (Erlang solutions ejabberd fork)
- XEP-0184 Message Delivery Receipts
- Proprietary extensions
  - Call control (APNS/GCM)
  - Social network integration
    - Facebook
    - LinkedIn
    - ...
- Reduced client traffic
  - autojoin of MUC (conceptually always online)
  - only plain authentication over TLS
  - customized XEP-0313 Message Archive Management
  - Bits and bobs
The stack (new and improved)

- OpenSIPS (Lua)
  - SIP signalling
  - CDR generation
  - Call control
- Freeswitch (Lua, Erlang)
  - Call control
  - CDR generation
  - Voice validation
- Asterisk
- Proprietary JAVA/PHP
- Open Source
  - CRM
  - Reporting

- PHP Erlang
  - APNS/GCM
  - Address book
  - SMS
  - Voice Validation
  - Social integration
  - Attachments
- MySQL
  - hot standby
  - Percona XtraDB Clustering
- CouchBase
  - speed layer
The stack (Mongoose)

- XEP-0198 Stream Management
- XEP-0305 XMPP Quickstart
- Oh, don’t get me started ...
Thank You!