ABC - Adaptive Session Border Control

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About Frafos

- **Pedigree**: Frafos folks came out of prestigious Fraunhofer FOKUS Institute in Berlin. CEO is Berthold Butscher, CTO Stefan Sayer.

- **Major focus:** Building programmable SBC built on top of SEMS. The ABC-SBC combines SIP logic with business logic stored in web environment, and also serves as customer-care vehicle.

- **Business model**: teaming up with expert companies that rapidly deliver applications on top of frafos software. In fact, we have already joined forces with several companies in the room.
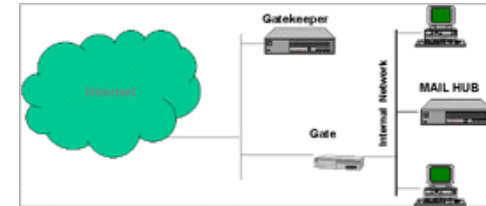
SBCs Don't Catch up with Applications Today

I.

First Generation Products

Ford-T, 1908

80s-90s, Packet Filters (DEC Seal)

II.

Hi-tech: Perfection, Safety, Intelligence, Grim acronyms

Airbag: Mercedes-Benz, 1980
Fuel efficiency, computerization,
ABS, ESP, ASR, TSA, RSC

2000 on, Deep Packet Inspection (DPI),
Intrusion detection systems (IDS), Application
Level Gateways (ALG), and eventually
Session Border Controllers (SBC)

III.

Fashion and Entertainment

2010: audio, video,
internet, SuperNavi,…

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state-of-the-art SBCs: Self-assessment…

If your firmware is not up-to-date with new applications, will you tolerate dropped traffic?

Can the firewall/SBC language really capture the high-level policies??? …

- Limit incoming calls to facebook friends

- Don't go beyond subscriber's prepaid amount

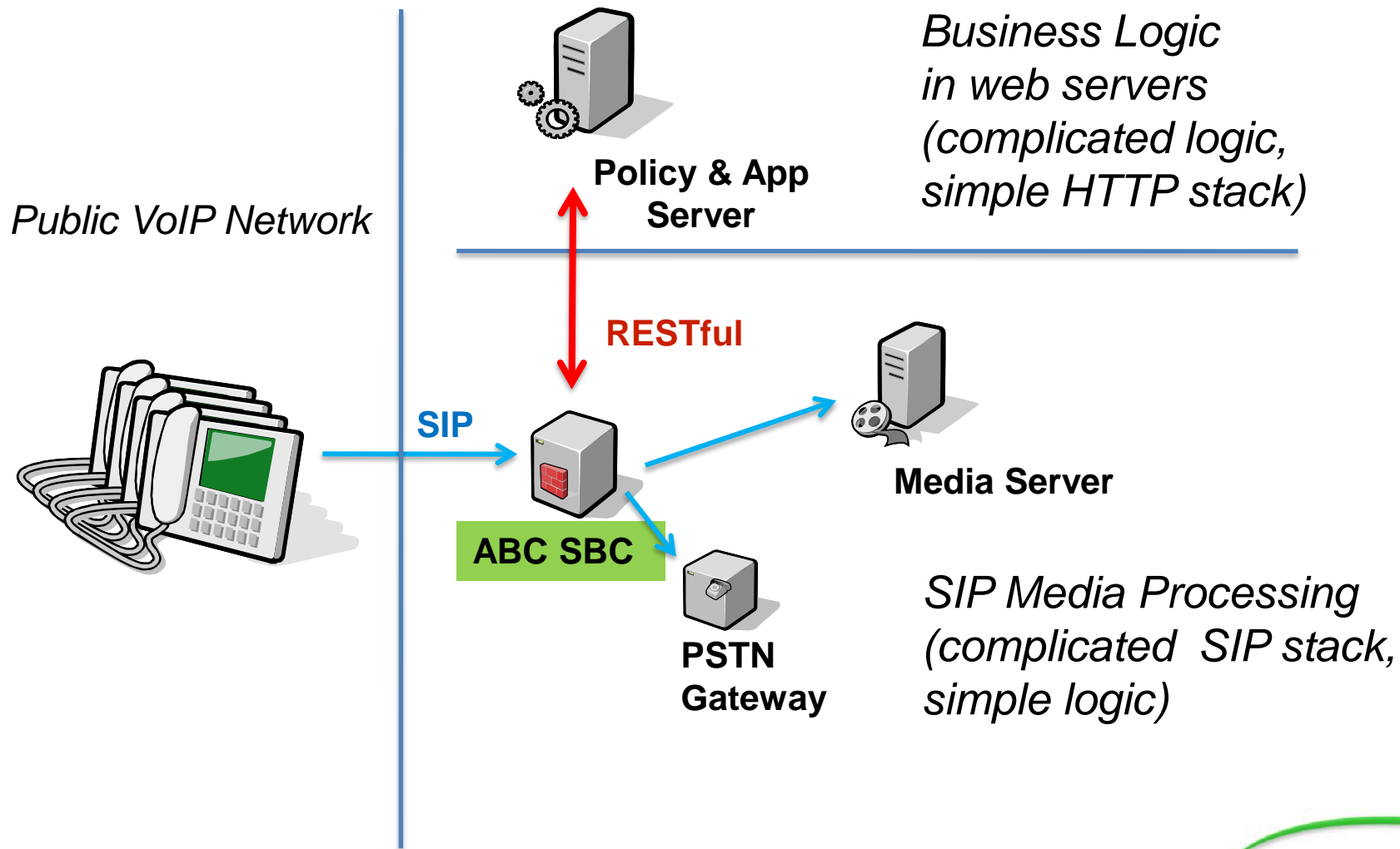- Don't allow minors to watch adult content

- …etc … etc …

... and our answer is: **ABC SBC**

- The adaptation ability of static security products (SBC boxes) is a poor match to dynamic nature of the entertainment and App age.

- There is some historical logic in it: it is obviously not wise to make hundreds of customized changes to an auditable security product.

- Our answer relies on the decomposition principle: the ABC-SBC consists of:

  - tough low-layer security foundation linked to "high-level business logic" in the Web Space using RESTful interface

  - web-programming environment allows adaptation to new business logic, which can originate in CRMs, provisioning systems, Web2.0 applications, etc.

Shift of Business Logic to Webspace

Policy & App Server

Business Logic in web servers (complicated logic, simple HTTP stack)

Public VoIP Network

RESTful

SIP

ABC SBC

Media Server

PSTN Gateway

SIP Media Processing (complicated SIP stack, simple logic)

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How Web Programming works…

Example: enabling authentication. The ABC-SBC asks a web PHP scripts that verifies credentials in a SIP request and suggests whether to accept or decline the SIP request.

A. Define RESTful query in ABC's configuration.

From Domain == "foo.bar" AND Method == "INVITE" AND R-URI User == "music"

Read call variables over REST: http://foo.bar/auth.php?method=$#(#m)&proxy_auth=$#($H(Proxy-authorization))

… in between, a PHP web script calculates a decisions and returns it …

B. Receive an array of variables that describe how to handle the request.

```
code=407.
phrase=authenticate.
headers=Proxy-Authenticate: Digest realm="securesip.com",nonce="68…50ab"
```

C. Apply the result in ABC's configuration to request handling.

Call Variable: code != "200"

Refuse call with reason and code: Reason: $V(gui.phrase), Code: $V(gui.code), Header fields: $V(gui.headers)

More ABC Features

- Topology hiding
- Rate limitation
- SIP modifications
- 3-step A-B-C rule management
- NAT-traversal and REGISTER off-load
- RESTful/RADIUS
- SNMP

- Coming
  - Built-in media processing (conferencing, recording, transcoding)
  - Mobile wake-up
- Yet more coming
  - VPN
  - webRTC

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Announcement: ABC-SBC is out!

- Today, frafos has released a new version of brand-new Session Border Controller, **ABC-SBC**

- TRY IT OUT. The trial VM image (in both vmware and OVF formats) is available immediately at the following URL:

**www.frafos.com/free-trial**

ABC SBC Agility Shortens the Lifecycle

- Agile development: High-level security policy outsourced to secure web programming environments using a RESTful interface

- Agile distribution: Away from box selling, ABC SBC is available as software or virtualized machine

- Agile customer care: Focus on rapid adaptation and troubleshooting; ABC-SBC maintains a history of user behavior.
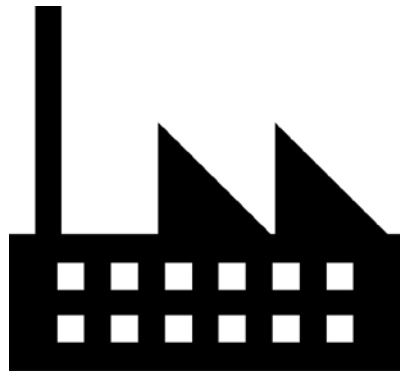
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Welcome to Frafos Open-source World
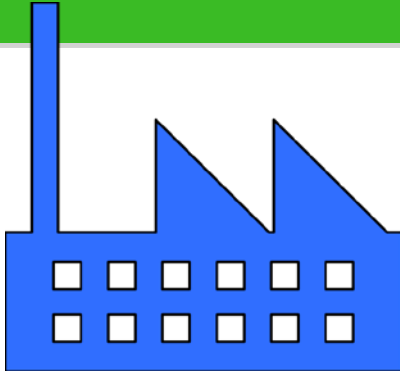
Longer release cycles, regular updates.

FRAFOS. Open-source **manufacturer** maintains SEMS, provides productized packages, which are integrated, tested, interoperable and security-audited.

Rapid delivery.

Expert **companies** implement business logic in web programming. They advance quickly because they don't have to bother too much about stack, SIP integration, and specifics of a specialized programming environment.
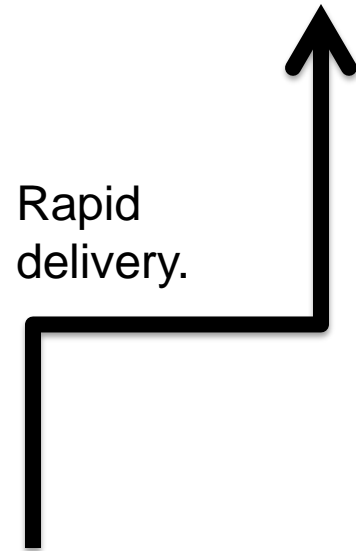
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Thank You

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FAQ

- Is ABC-SBC available under open-source terms?
  - Case-by-case, the normal mode-of-delivery under warranties is binary packages.
  - Open-source archive available to customers upon request.

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