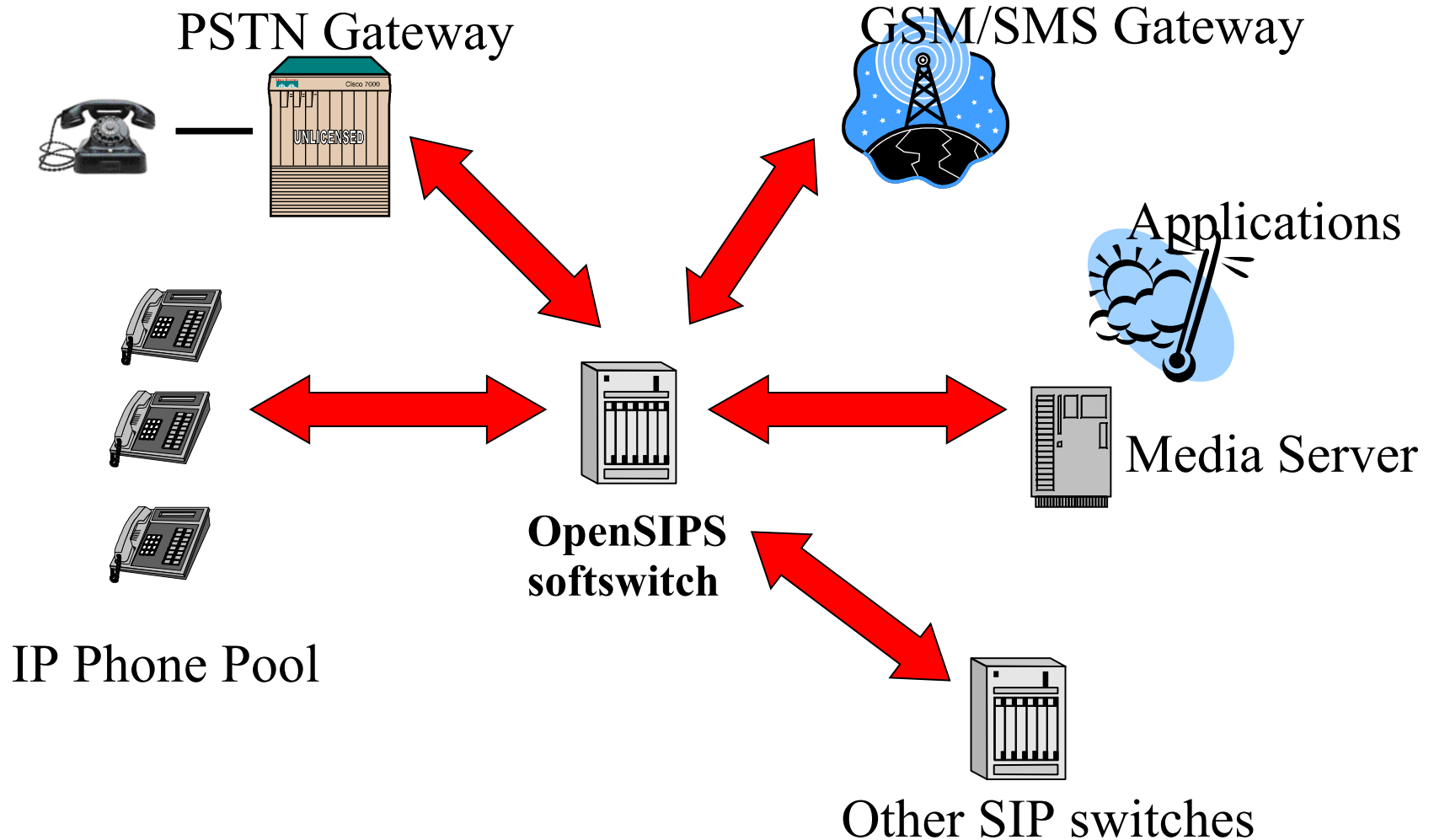# *OpenSIPS – networking the VoIP*

Bogdan-Andrei Iancu
CEO Voice System
Founder OpenSIPS Project

- **OpenSIPS is an open source, GPLed SIP server with**
  - High scalability (up to **thousands of calls per second** of transactional throughput on a PC)
  - Effective application building (modules and **application interface**)
  - High flexibility (**routing language**)
- **OpenSIPS is a multi-functional, multi-purpose SIP server: router, switch, registrar, application server, redirect server, gateway, load-balancer, etc**
- **OpenSIPS is only about signaling, but there are media adds-on**
- **it is not a PBX – that's Asterisk !**

PSTN Gateway

GSM/SMS Gateway

Applications

Media Server

OpenSIPS softswitch

IP Phone Pool

Other SIP switches

OpenSER project is created in 2005 by Voice System as a fork on SER.

OpenSER becomes one of the most performant and well-known open source SIP proxy.

OpenSER is used by telcos, network operators, enterprises.

In 2008 Voice System has to rename OpenSER as OpenSIPS due trademark issue.

Powering _residential and business VoIP services_

- **high scalability and capacity (large number of users)**
- **flexible and powerful backend ⇒ easy to integrate**
- **large set of end-user features (easy service creation)**
- **distributed (geographical) solutions**

Interested in this, are:

- **Internet Telephony providers or ISPs**
- **mobile carriers**
- **traditional telcos**

Powering _trunking and carrier grade solutions_

- **high capacity (thousands of calls per second)**
- **powerful engine to support various and complex logics for traffic routing and dispatching**
- **high availability and easy to scale**
- **handy provisioning and control support**

Suitable for:

- **interconnection and traffic trunking**
- **service fronting and load-balancing (whole sale PSTN providers or call centers)**
- **service dispatching in large platforms**

Loadbalancer/ cluster controller

- **built-in functionalities for intelligent routing and dynamic re-routing**
- **real load balancing capabilities based on traffic monitoring**
- **resource management**

Suitable for:

- **Media servers/gateway load-balancer**
- **ingress and egress routing**
- **LCR / prefix routing**

OPENSIPS

PSTN Gateways

**OpenSIPS
Load Balancer**

Media
conference

Media Voicemail
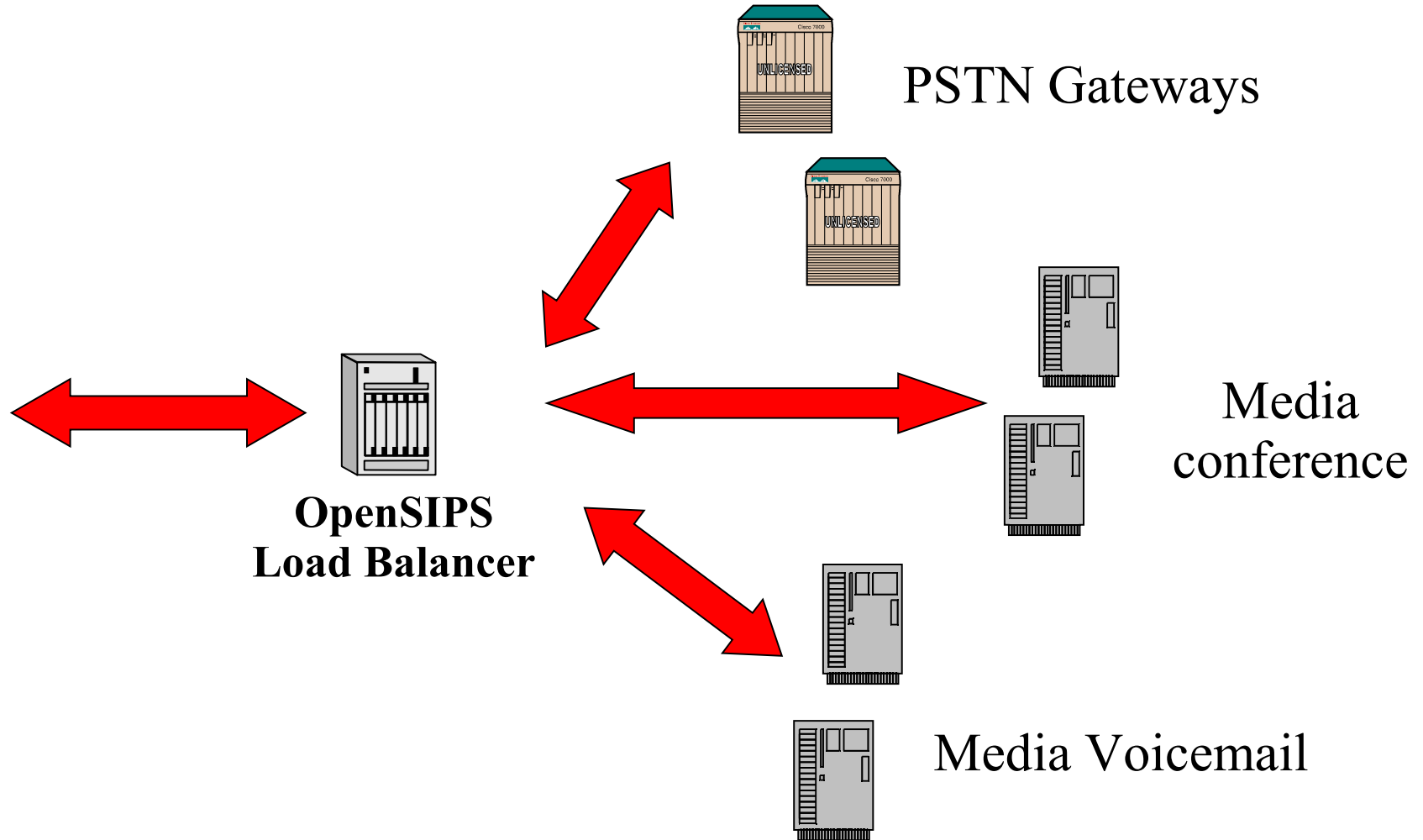
White-label solutions

- **flexibility allows fine control and clustering of services.**
- **control over distributed and dedicated resources**
- **powerful dial plan support**

Fix mobile convergence

- **meets requirements for WiFi networks and mobile device clients.**
- **able to get control over the media part**
- **makes possible the complex logic required by handover scenarios between SIP and GSM**

SIMPLE Server

- **Presence Server model**
- **XCAP (privacy/permissions rules)**
- **Publishing external information**
- **Old / hardphone support**
- **XMPP gateway**
- **BLA / SLA**
- **Resource List Server (RLS)**

Nokia interoperability tests – specs and implementation → easy setup documentation

Dedicated solutions:

- **ENUM platform (router)**

- **SBC (NAT traversal or security enforcement)**

- **Interconnection point between providers (discovery and inter-routing services)**

- **Billing server**

- **IM server (conferences, message storage)**

- **SMS gateway (ATA modems or SMPP)**

- **XMPP gateway (presence and IM)**

OPENSIPS

What made OpenSIPS successful in top-level industry readiness/compliance:

- **robustness**
  - **performance**
  - **security**
  - **scalability**

- **management**
- **connectivity and reachability**
  - **peering / federation**
  - **presence**
  - **XMPP**

- **power and flexibility**
  - **application server**
  - **PERL scripting**

OpenSIPS Project

OpenSIPS is a public project based on collective effort

- **80% of the project is sustained by Voice System**
- **large number of developers :**
  - 3 core developers
  - 22 main developers
  - ~30 developers
  - ~150 contributers
- **worldwide community of users**
- **OpenSER Summit at VoN Berlin, November 2006**
- **OpenSER Summit at VoN San Jose, March 2008**
- **OpenSIPS Bootcamp in Miami, June 2008**
- **OpenSIPS Developer course in Bucharest, June 2009**

- **no vendor trap**

- **faster development cycle**

- **split work between parties**

- **easy synchronization with the main stream via contributions $\Rightarrow$ unified effort for development**

- **performance and flexibility**

.....also called OpenSIPS

on steroids!!

11 new modules

memcache support

+25% speed up in DB ops

load-balancer capabilities

presence (RLS, XCAP)

....all this in ~6 months

Thank you for your attention
You can find out more at www.opensips.org

Questions are welcome