



Open Telecom Application Platform for Startups

Au Duong Dat, Chairman - VHT

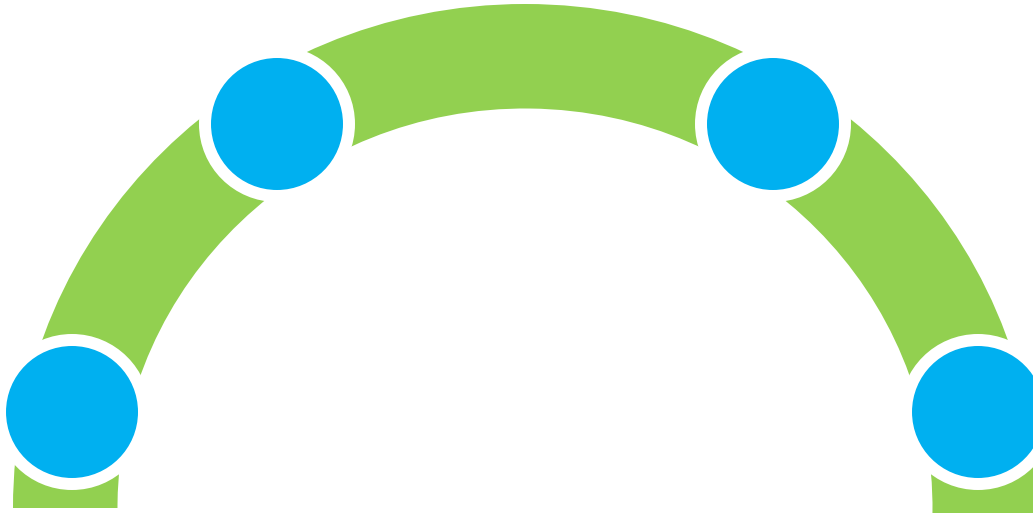
Content

WebRTC

SIP / WebRTC Client

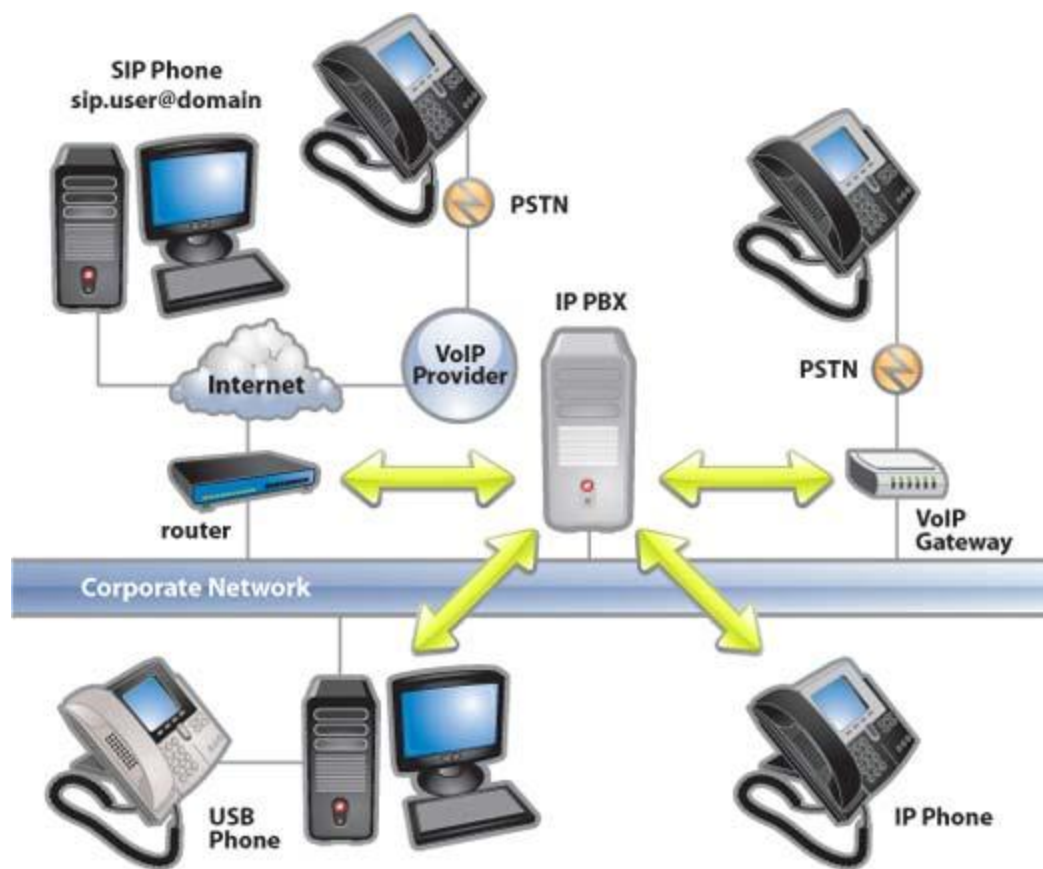
IP-PBX

Use Cases



1

IP-PBX



PBX (Private Branch Exchange) is a system that connects telephone extensions to the PSTN (Public Switched Telephone Network) and provides internal communication for a business. An IP-PBX is a PBX with Internet Protocol connectivity and may provide additional audio, video, or instant messaging communication utilizing the TCP/IP protocol stack.



Asterisk is an open source framework for building communications applications. Asterisk turns an ordinary computer into a communications server. **Asterisk** powers IP PBX systems, VoIP gateways, conference servers and other custom solutions. It is used by small businesses, large businesses, call centers, carriers and government agencies, worldwide. **Asterisk** is free and open source. **Asterisk** is sponsored by **Digium**



FreePBX
let freedom ring™





FreeSWITCH is a scalable open source cross-platform telephony platform designed to route and interconnect popular communication protocols using audio, video, text or any other form of media. It was created in 2006 to fill the void left by proprietary commercial solutions. FreeSWITCH also provides a stable telephony platform on which many applications can be developed using a wide range of free tools. FreeSWITCH was originally designed and implemented by Anthony Minessale II with the help of Brian West and Michael Jerris. All 3 are former developers of the popular **Asterisk** open source PBX.



2

WebRTC

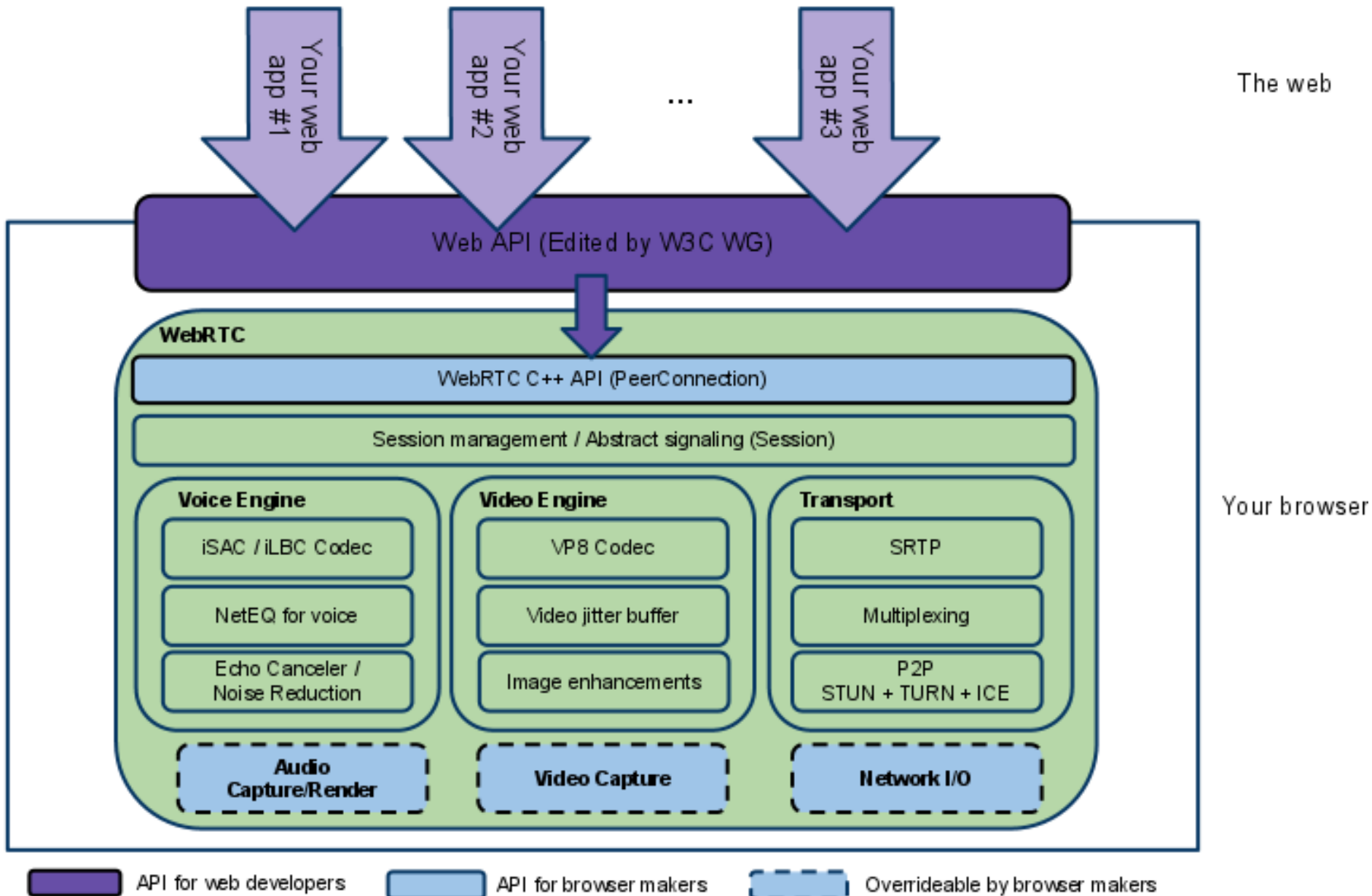


WebRTC is a free, open project that provides browsers and mobile applications with Real-Time Communications (RTC) capabilities via simple APIs. The WebRTC components have been optimized to best serve this purpose.

WebRTC enable rich, high quality, RTC applications to be developed for the browser, mobile platforms, and IoT devices, and allow them all to communicate via a common set of protocols.

The **WebRTC** initiative is a project supported by Google, Mozilla and Opera, amongst others.

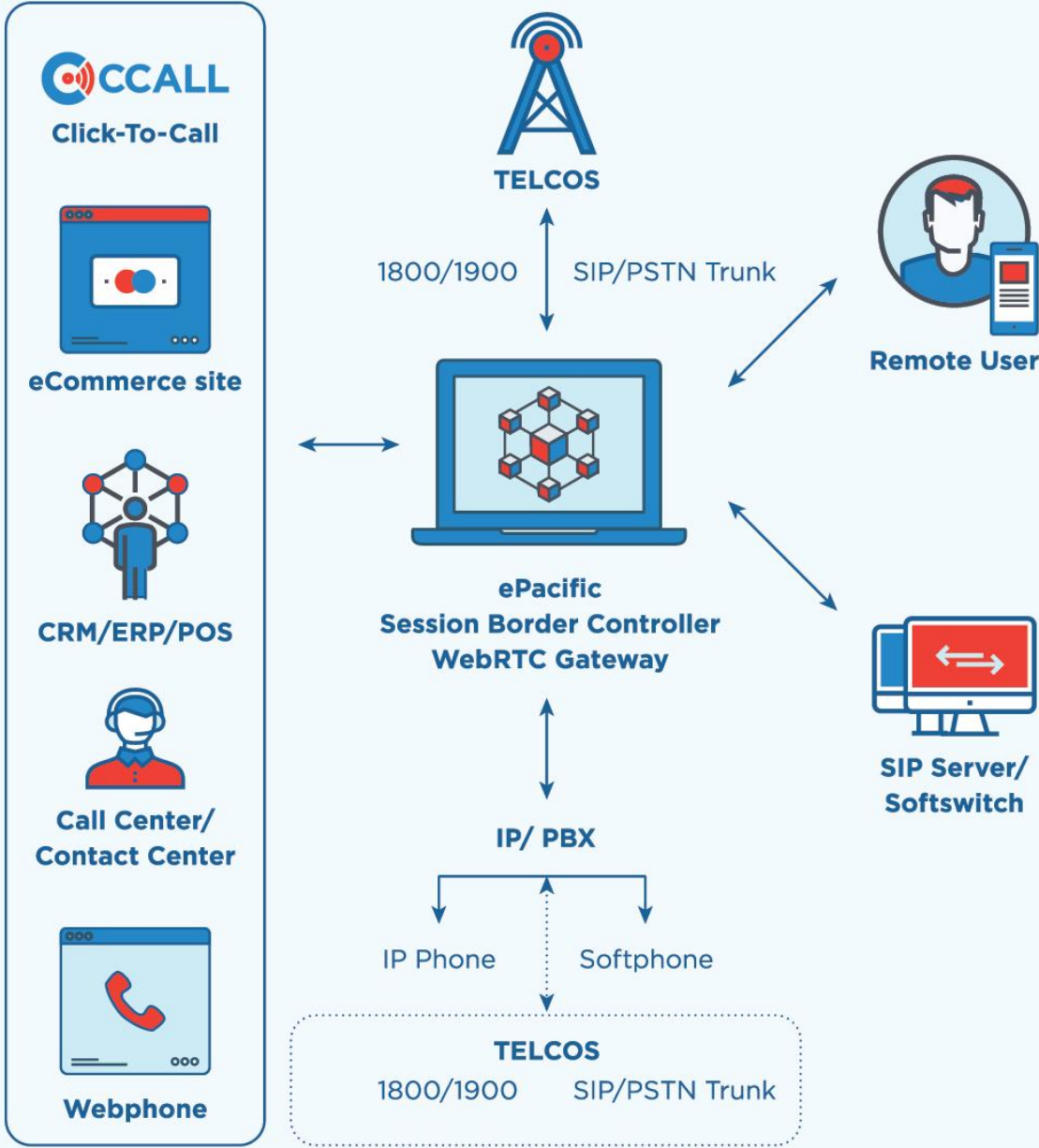
WebRTC Architecture



3

SIP / WebRTC Client

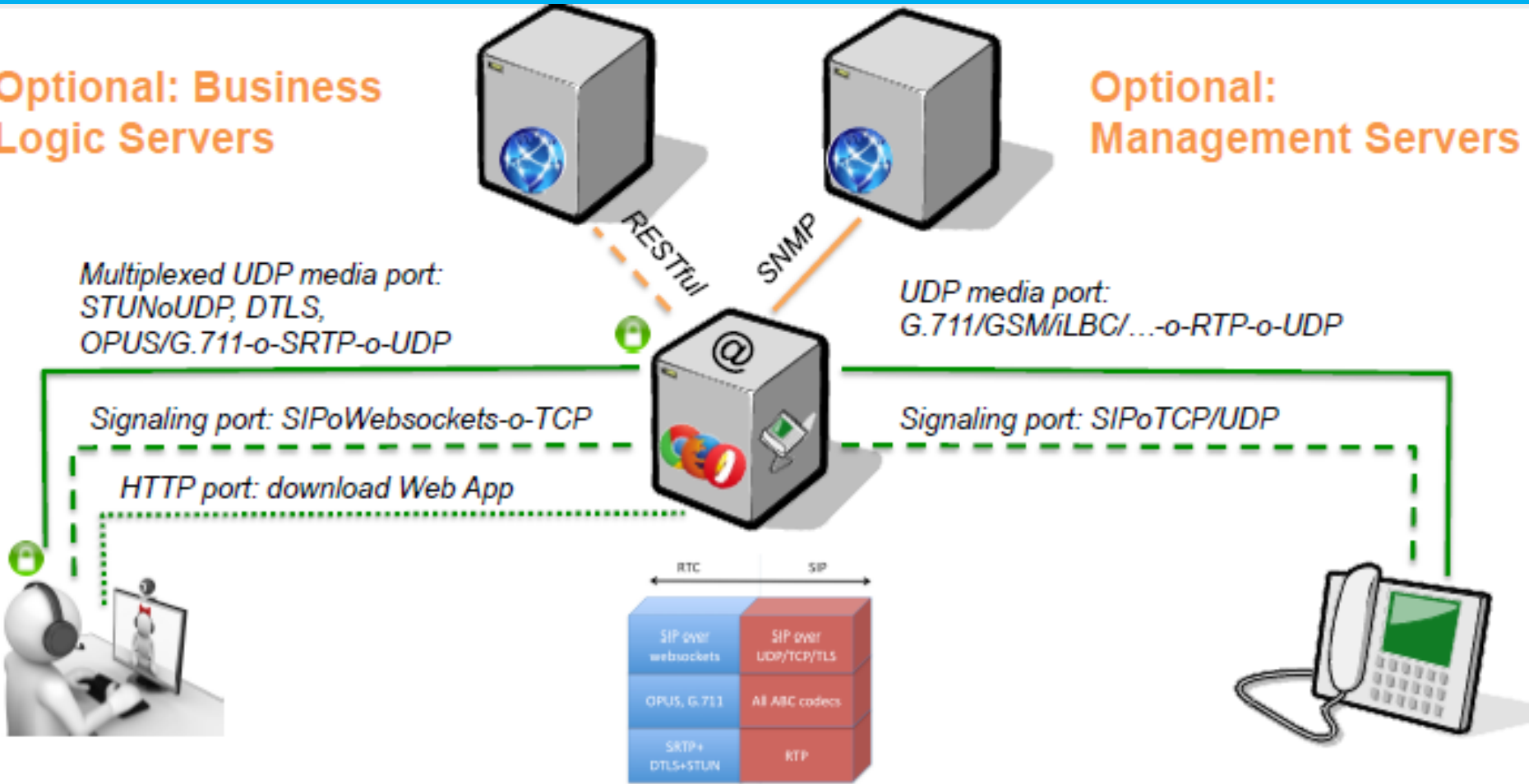
WebRTC Gateway



Protocol Reference Diagram

Optional: Business Logic Servers

Optional: Management Servers



WebRTC Browsers

ePacific WebRTC Gateway

SIP Equipment

JsSIP is a simple to use **JavaScript** library which leverages latest developments in **SIP** and **WebRTC** to provide a fully featured SIP endpoint in any website. With **JsSIP** any website can get Real Time Communications features using audio, video and more with just a few lines of code.

SIP over WebSocket transport.

Audio/video calls, instant messaging and presence.

Lightweight!.

100% pure JavaScript built from the ground up.

Easy to use and powerful user API



Getting Started

JsSIP User Agent is the core element in JsSIP. It represents the SIP client associated to a SIP account. JsSIP User Agent is defined by the [JsSIP.UA](#) class.

Multiple JsSIP User Agents can be created (this is useful for having different SIP accounts running in the same web application).

Creating a JsSIP User Agent

User Agent Configuration

JsSIP User Agent requires a configuration object for its initialization. There are some mandatory configuration parameters and many optional ones. Check the full [configuration parameters](#) list.

```
var configuration = {
  'ws_servers': 'ws://sip-ws.example.com',
  'uri': 'sip:alice@example.com',
  'password': 'superpassword'
};
```

User Agent instance

```
var coolPhone = new JsSIP.UA(configuration);
```

User Agent events definition

Full list of User Agent [events](#).

WebSocket connection events

```
coolPhone.on('connected', function(e){ /* Your code here */ });  
coolPhone.on('disconnected', function(e){ /* Your code here */ });
```

New incoming or outgoing call event

```
coolPhone.on('newRTCSession', function(e){ /* Your code here */ });
```

New incoming or outgoing IM message event

```
coolPhone.on('newMessage', function(e){ /* Your code here */ });
```

SIP registration events

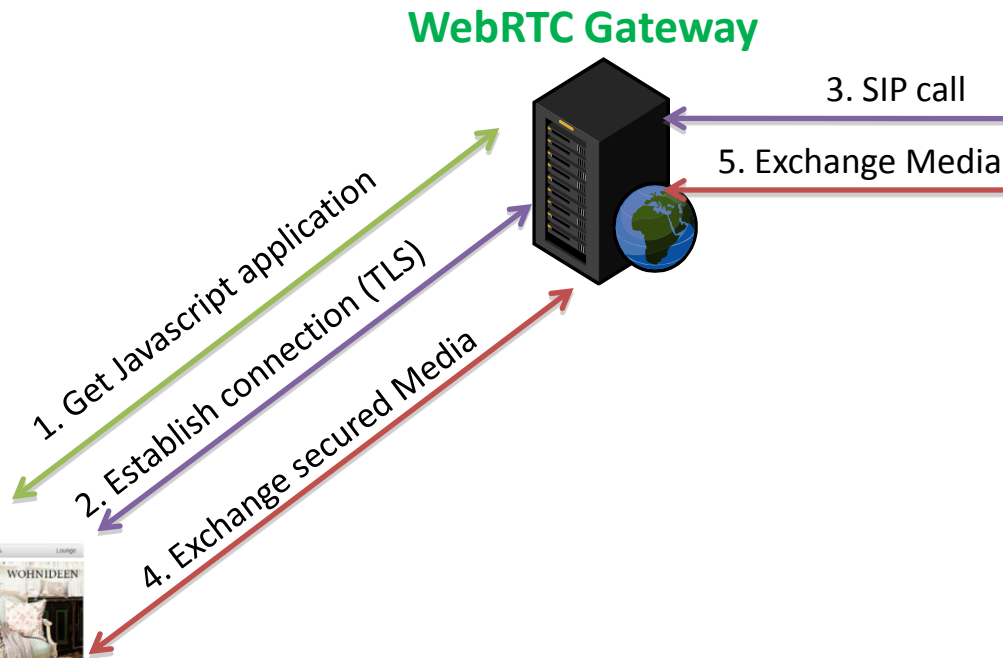
```
coolPhone.on('registered', function(e){ /* Your code here */ });  
coolPhone.on('unregistered', function(e){ /* Your code here */ });
```

4

Use Cases

Online Customer Interaction

1. Users download the application as a Javascript
2. Caller establishes a call with the WebRTC gateway
3. WebRTC gateway established a VoIP call to Call center
4. Caller and Call center exchange data

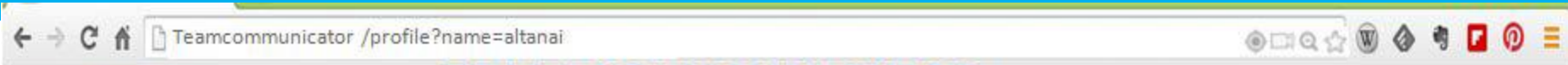


Contact Center Software

The screenshot displays a contact center software interface with the following components:

- Navigation Bar:** Communication | Team | Dashboard | Statistics
- Agent Status:** Peter Lobotka (Available) | 01:02:25
- Left Panel (Contacts):** Search for people, AVAILABLE list (Mary Valdez, Jack Carpenter, Jerry Williams, Jessica Ward, Cynthia Schneider, Douglas Miller, Julie Scott, John Larson, Jerry Burton, Adam Andrews, Billy Thompson, Rose Johnson, Carol Garrett, Tom Allen), Filter.
- Tasks Panel:** Tasks | Not assigned | Assigned | Me (Peter Lobotka) | New task button.
- Call Log:** Calls (7) | Call Mr. Anton Schrober | Call Samuel Gakery | Call Tom Williams.
- Communication Windows:**
 - Mortimer Mahler:** Call log, +SMS +e-mail +task, 24. 10. 2012, Me: These services include, among others "systems integration, hosting, financial services such as payment processing. Michaela je offline. Send as SMS.
 - Spinoco (James David):** Call log, +SMS +e-mail +task, 12:38, SMS: We look at the growth of Manchester's MediaCityUK and The Landing, a business incubation hub, Manchester. Me: Workplace pensions provider NOW: Pensions and Employer Services Limited (esl) have today announced a strategic partnership. Spinoco is writing...
 - Jana Jamik:** Call log, +SMS +e-mail +task, 12:20, E-MAIL: October 2014. Make a strategic decision on what problems you want your CRM system to address, what improvements or changes it should bring in the business processes... Open Reply.
- Right Panel (Contacts):** Search, A (Richard Alvarez, Aston Archer), B (Jennifer Bakery, Richard Brack, Gloria Bradley, Peter Bukoven), E (Kathy Elliott), G (Tiffany Garrett, Kelly Gibson, Carol Gilbert, Marek Gill, Michal Glover, Ashley Goricka, Samuel Gakery), Filter.
- Bottom Bar:** Your message | Send | Your message | Send | Your e-mail | Send.

Team Communicator



TEAM COMMUNICATOR



Altanai
sip:altanai@domain.com

New Picture

● Online from WebRTC

Personal Details

Status update

Call Settings

Contacts

Security

Conferencing

sip:bob@domain.com (Bob Higgens)
sip:peter@domain.com (Peter Locs)
sip:altanai@domain.com (Altanai)- Me



In Call
00:36:02

Join

Hold/Resume

Leave

In Call



Bob Higgens
Sip:bob@domain.com



Altanai
Sip:altanai@domain.com



Kaka B
Sip:kaka@domain.com



Paula Brown
sip:paula@domain.com

- Peter Locs ●
- Bob Higgen ●
- Paula Brown ●
- John Danken ●



Customer Relationship Software

The screenshot displays a web browser window at `webRTCCRM/page1` with a CRM interface. The top navigation bar includes 'File', 'Contacts', 'View', 'Create Related', and 'Customize'. The main toolbar is divided into sections: 'Records' (New, Edit, Activate, Deactivate, Delete, Merge, Detect Duplicates, Send Direct E-mail), 'Collaborate' (Add to Marketing List, Connect, Assign), 'Process' (Share, Copy a Link, E-mail a Link, Run Workflow, Start Dialog), and 'Data' (Run Report, Import Data, Advanced Find).

On the left, a sidebar menu lists 'My Work' (Dashboards, Activities, Calendar, Imports, Duplicate Detection, Queues, Articles, Reports, Announcements) and 'Customers' (Accounts, Contacts). A 'Workplace' section at the bottom lists Sales, Marketing, Service, Settings, and Resource Center.

The central area shows an 'Ongoing conference' with four participants, all identified as 'Shara Williams CEO Domain'. Below the participants are controls for 'Ring simultaneously for 20 seconds', a list of participants (1007: Conference Room, Link or External Number), and buttons for 'Invite', 'Pause', and 'End'. A 'Screen sharing Active' overlay shows a Venn diagram with 'Collaboration' at the center, overlapping 'Unified Communications', 'Data Center', and 'Network'. To the right, a diagram lists features: 'All Encompassing' (A Platform enveloping SaaS, SOAs, Network ecosystem and collaborative applications), 'Cloud Based' (Distributive Platform Over IP Cloud which Allows software to be run and data to be stored on remote servers), 'Network Agnostic' (Fully network agnostic platform to develop, manage any deploy combinatorial applications), and 'Catering Collaborative Communication' (The Platform Caters voice, unified messaging, mobility, presence, conferencing, collaboration, and more).

At the bottom, a 'Shared Items' section displays five thumbnails of various CRM reports and dashboards.

Network Operation Center

Network Operation Manager

Hardware

Software

Network

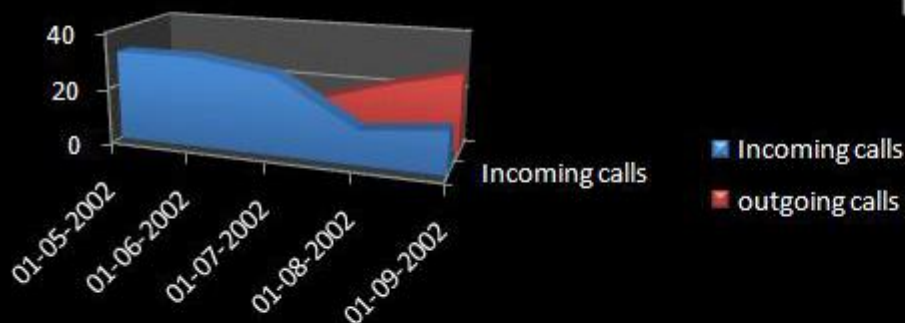
users

Reset

All details

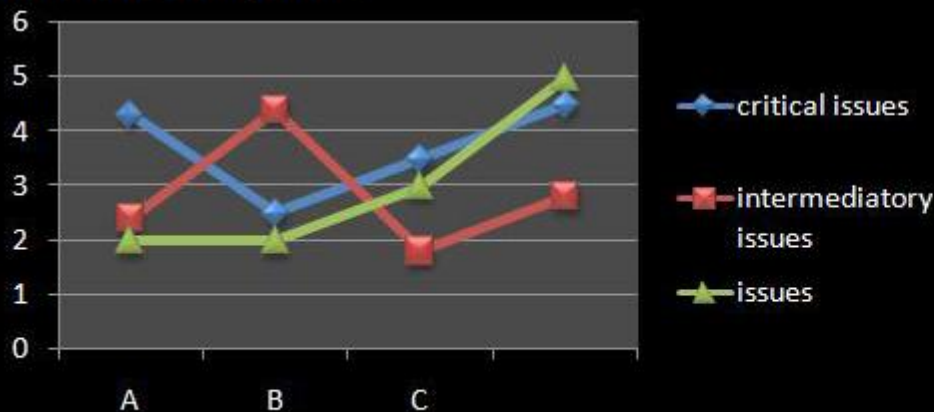
sip:daniel@domain.com

Network Monitoring- WebRTC



Internal Services
Account services
Deactivation services

Incident Response



Call Log	User	Date	Time	Period
Incoming	Bob Higgins	12/06/2014	13:00	15 min
Outgoing	James Cooper	12/06/2014	12:45	4 min
Incoming	John Danken	12/06/2014	12:30	1 hour

Human Resource Management

JOBS online

ALTANAI BISHT

Objective

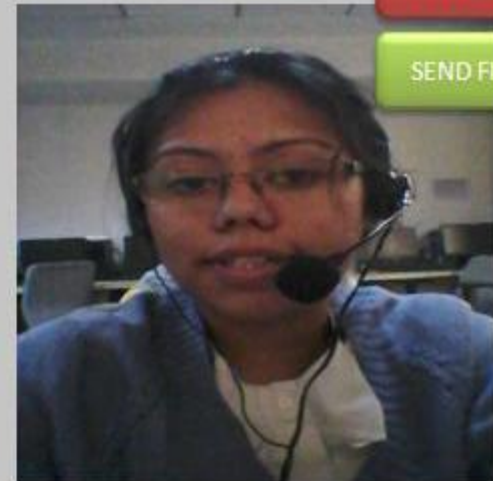
Maverick software engineer aspiring to utilize her technical and interpersonal skills while being innovative .

Personal Profile

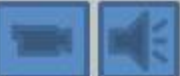
Date of Birth	22/09/1989
Sex	Female
Father's name	D.S Bisht
Mother's name	Maya Bisht
Languages known	English , Hindi , Japanese

Skills

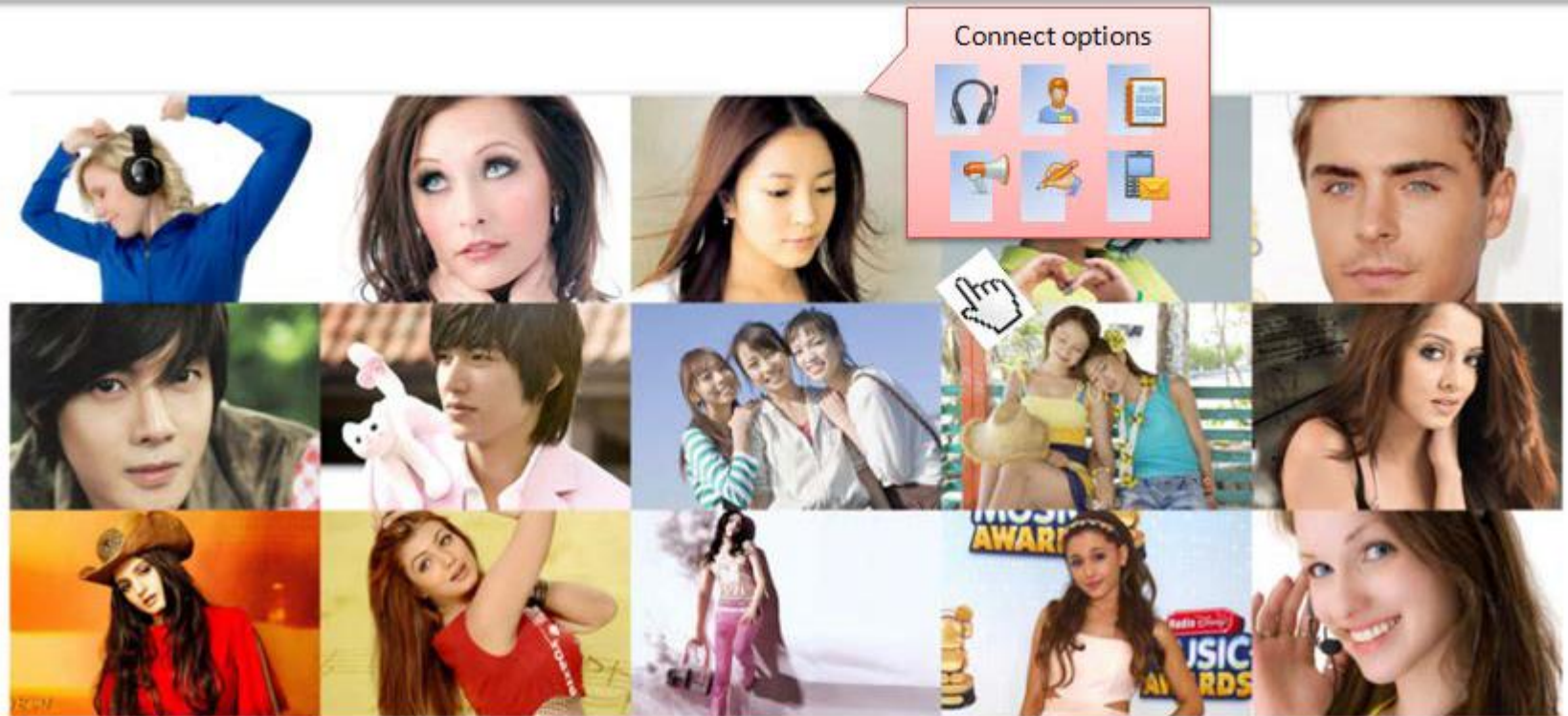
Language	: C, C++, C# , VisualBasic ,JAVA (NIIT certified , SCJP certification), J2EE(NIIT certified), JavaME , Microsoft.net , XML , HTML 5
Scripting	: Javascript , PHP, SQL ,unix shell , ASP , JSP, AJAX , CSS 3
Packages	: MS-Office, Oracle 10 ,Visual programming , Netbeans , Eclipse , IBM Rad ,Salesforce CRM
Platforms	: Linux ,Windows 95/98/2000/XP/Vista/7, Symbian , bada , android
Networking	:WAN technologies(T1/DS1,T3/DS3,ISDN), Intranet/Internet technologies andprotocols (VOIP , DNS , SMTP , POP3 , HTTP , TCP/IP , SSH , ATM , TCP/IP , VPN)



In call 00:10:45



Dating Site



Call Log

User

Date

Time

Period

Incoming



User394889

12/06/2014

11:00

5 minute

Outgoing



User297923

12/06/2014

12:45

4 minute

Incoming



User093898

12/06/2014


19:30

1 minute

Online Medical Consultation

View my profile Call a doctor Call nurse Book appointment Path Lab View prescriptions Get ambulance

Logged In as Altanai Bisht

My profile 

- Altanai Bisht
- Patient No: 576489

Last Prescription

-  Dr Brian Gynaecologist
-  Dr Jane Richer Dental Surgery
-  Dr Archur F Dentist

Reminders

Consults the doctor from Chicago and Dr Kain

Dr Jane Richer
Orthodeontist



In call

00:01:20







Open Tickets (current)

Ticket Statistics (this week)

0
YOU

0
GROUPS

0 GOOD **0** BAD **0** SOLVED **0** UNDELIVERED EMAIL **0** EXPIR

Tickets requiring your attention (0)

<input type="checkbox"/>	Subject	Requester	Updated time ▾
--------------------------	---------	-----------	----------------

Status: New (10)

- | | | | |
|--------------------------|----------------------------------|---------------------|-------------|
| <input type="checkbox"/> | ↑ CHẠY QUẢNG CÁO FACEBO... | Dat Do | 20 days ago |
| <input type="checkbox"/> | ↑ CHẠY QUẢNG CÁO FACEBO... | The Khanh Linh | 20 days ago |
| <input type="checkbox"/> | Dịch vụ tăng Like Facebook ... | không họ không tên | a month ago |
| <input type="checkbox"/> | Giáng sinh cùng mạng tuyến... | Tran Thi Trung My | a month ago |
| <input type="checkbox"/> | 🗝️ Đã chơi là phải chơi hàng ... | Thao Do | a day ago |
| <input type="checkbox"/> | [incoming - 908495911] 15/... | Caller +84908495911 | a day ago |

Voice Call logs 🟢 Online

📞 +84873073767 (ext: **1004**) ☰

Phone number ⬅

1	2	3
4	5	6
7	8	9
*	0	#

Call

Ticket Stats

7
New Tickets
(total)

0
Solved Tickets
(total)

6
Backlog
(average)

1
Agent Touches
(total)

0%
Satisfaction Rating
(average)

0 hrs
First Reply Time
(average)

Tickets by Channels



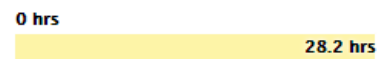
Phone Email
Facebook Wall

Benchmark

Satisfaction Rating



Average First Reply Time



New Tickets



Your Izihelp Global average

First Reply Time

0 hrs

Avg. First Reply Time

0-1 hrs 1-8 hrs 8-24 hrs >24 hrs



Hồ Chí Minh ⇌

Chọn ngày đi

TÌM VÉ

**DÙ BẠN Ở ĐÂU
TẾT LÀ ĐỂ VỀ NHÀ**

ĐĂNG KÝ NHẬN THÔNG TIN VÉ TẾT

← VeXeRe

Mon, 30/11/2015



Da giu cho. Ma giu cho:
XBW17U0. Ghe B23. Xe Tan
Thanh Thuy. Gia 90.000
VND. Vui long thanh toan
truoc: 18:[07 30-11-2015](tel:0730112015).
Hotline: [1900 6484](tel:19006484)

THANH TOÁN
NHANH CHÓNG

★ ★ ★
ĐỐI TÁC UY TÍN
CÁC HÃNG XE



