

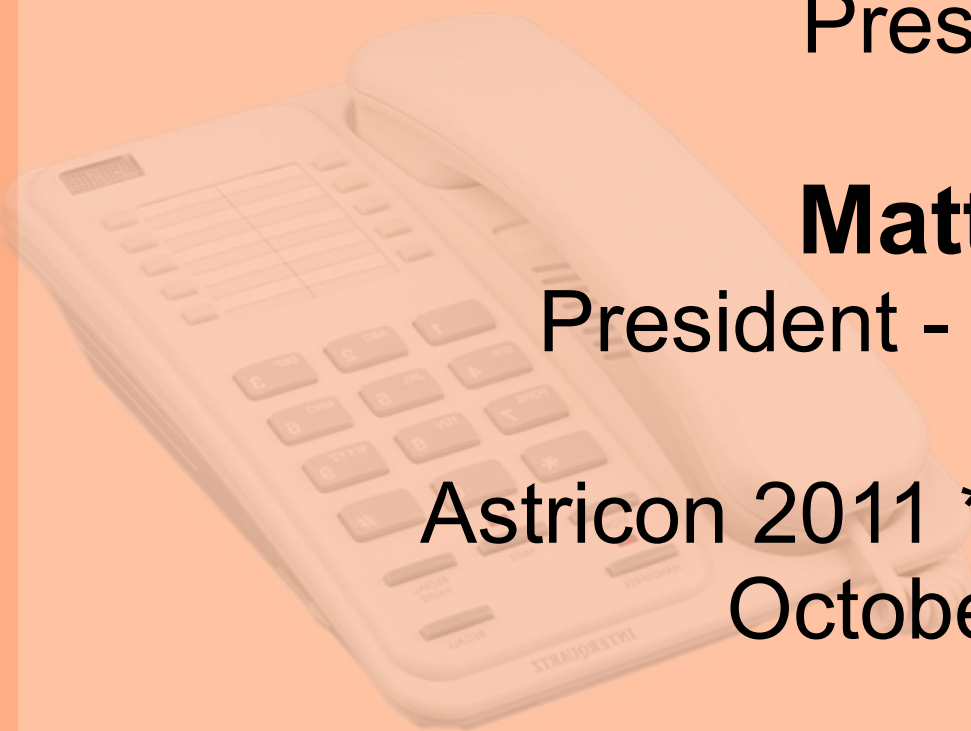
# The Ins and Outs of Web Browser Embedded Soft-Phones

Presented by

**Matt Florell**

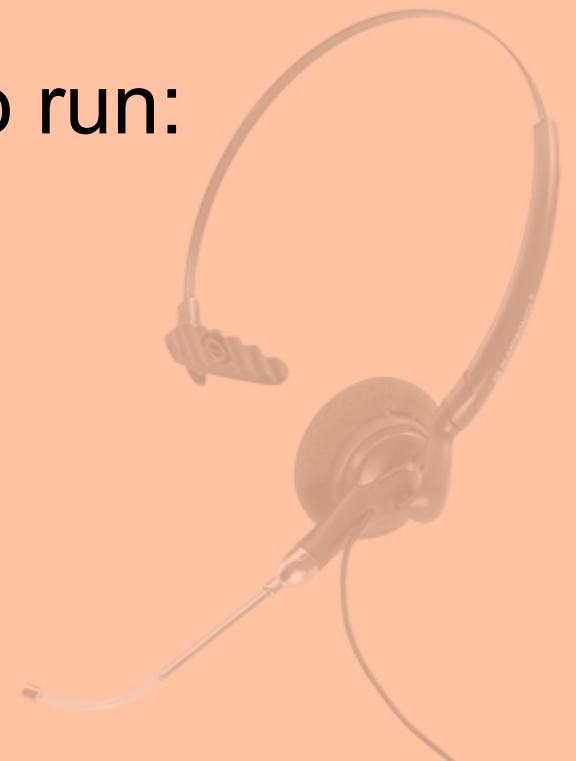
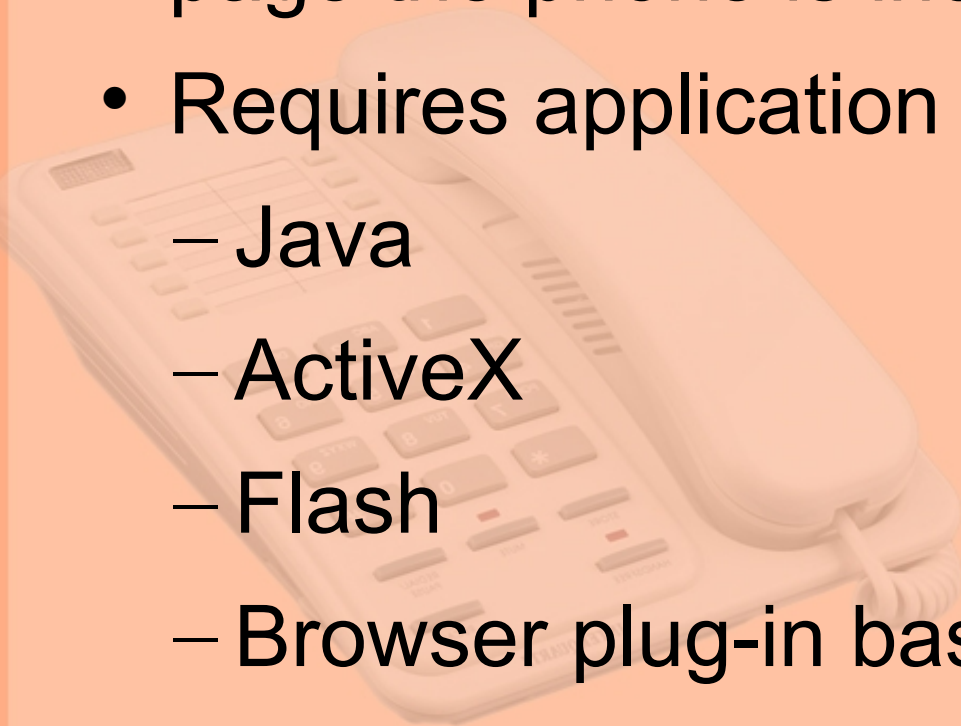
President - ViciDial Group

Astricon 2011 \* Denver, CO, USA  
October 26, 2011



# What is a Browser Embedded Phone?

- Runs inside the web browser, not as a separate application
- Usually requires no configuration from the end user since configuration can be set by the web page the phone is included inside
- Requires application framework to run:
  - Java
  - ActiveX
  - Flash
  - Browser plug-in based



# Web Page with Embedded Phone

Logged in as User: 6666 on Phone: IAX2/cc330 to campaign: TESTCAMP

GROUPS LOGOUT [WebPhone View -](#)

**VICIdial** SCRIPT FORM 2010-08-02 11:45:13 session ID: 8600051 Calls in Queue: 1 **LIVE CALL**

STATUS: Incoming: 727-555-1212 Group- TEST inbound 3 Fronter: - 7275551113 seconds: 21 [refresh](#)

**PAUSE RESUME**

☐ ALT PHONE DIAL  
RECORDING FILE:  
20100802-114450\_727555...  
RECORD ID: 1839  
**STOP RECORDING**

**WEB FORM**  
**WEB FORM 2**

**PARK CALL**  
**TRANSFER - CONF**  
**QUICK TRANSFER**  
**RE-QUEUE CALL**

**HANGUP CUSTOMER**

**SEND DTMF**

**Hello and thank you for calling ACME Widgets, My name is Admin, can I schedule an appointment for you to review our lovely widgets?**

Appointment Date: 2010-08-09 [help+](#) Appointment Time: 12:44 [help+](#)

Favorite Color:  
☐ Red  
☐ Blue  
☐ Green  
☐ Purple  
[help+](#)

Appointment Notes:  [help+](#)

Discussion Topics:  
☐ Price  
☐ Color  
☐ Texture  
☐ Shipping  
[help+](#)

Contact ID: 7275551113 [help+](#)

Nearest City: Chicago [help+](#)

**HOT KEYS INACTIVE** **MUTE** [Agents View +](#)

Agent web-client version: 2.4-281 BUILD: 100726-1233 Server: 192.168.198.5 [Hide Calls In Queue](#)

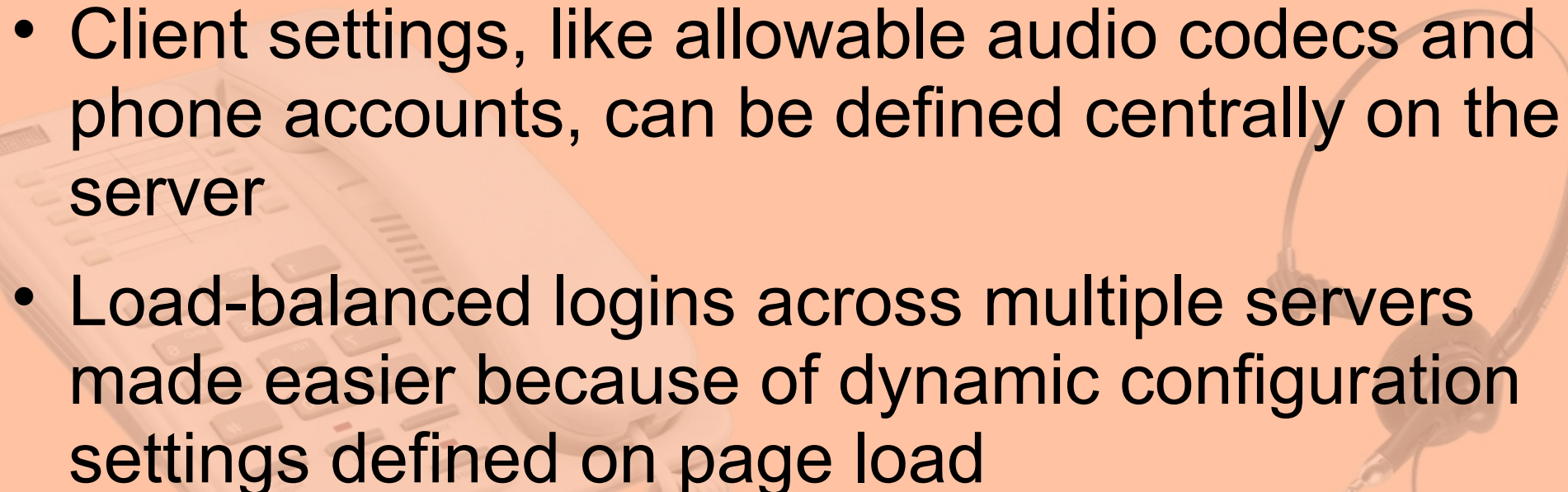
Calls In Queue:

PHONE	NAME	WAIT	AGENT	CALL GROUP	TYPE
7275551212	Testing	0:18	7275551113 -	TEST_IN3 - TEST inbound 3	IN

[TAKE CALL](#)

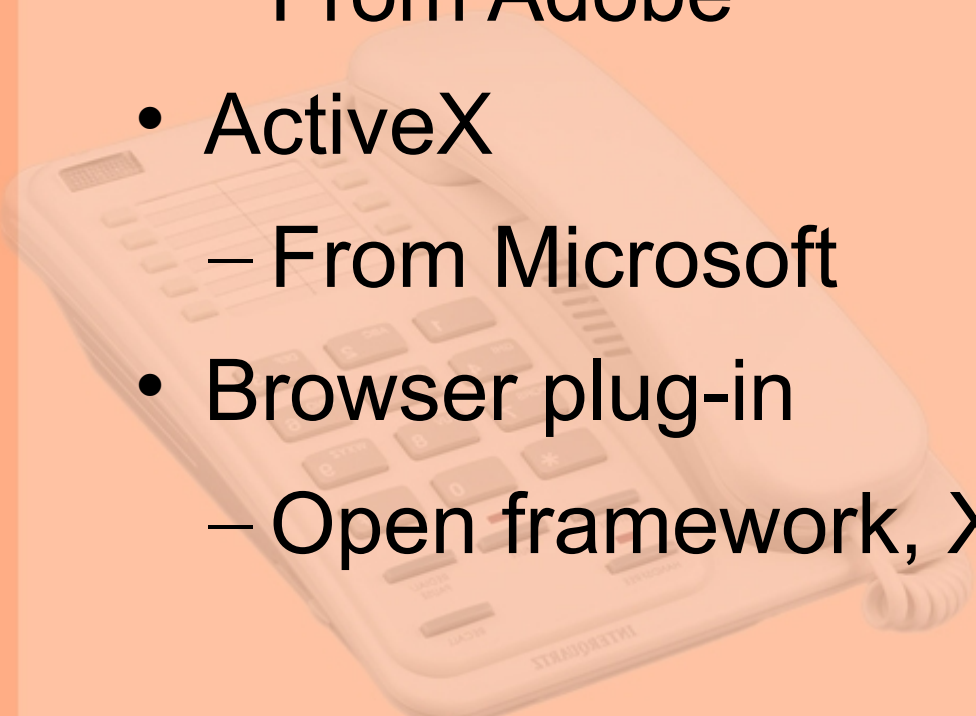
**WebPhone View -**  
Web Phone:  
**ZoIPER**  
Phone to dial  
Enter number to dial...  
  
1 2 3 4  
Account  
Your Phone

# Why Use a Browser Embedded Phone?

- For at-home users, much less tech support required because no configuration needed
  - Software versions can be updated on the server instantly with no user action needed
  - Client settings, like allowable audio codecs and phone accounts, can be defined centrally on the server
  - Load-balanced logins across multiple servers made easier because of dynamic configuration settings defined on page load
- 

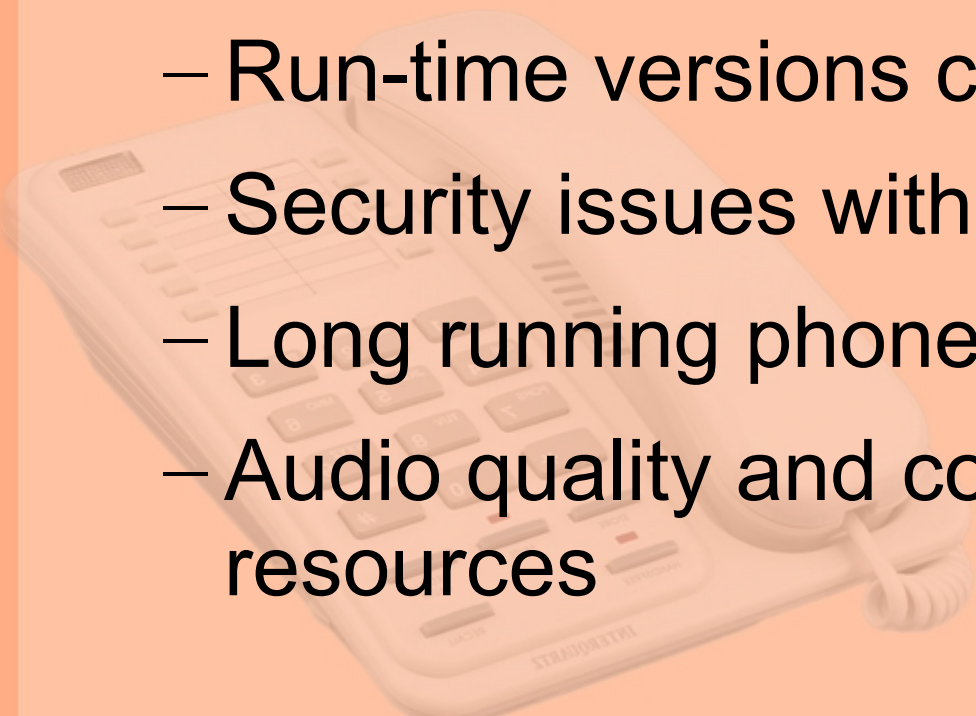
# Run-time Environments Used

- Java
  - From Sun Microsystems(now Oracle)
- Flash
  - From Adobe
- ActiveX
  - From Microsoft
- Browser plug-in
  - Open framework, XPI



# Java Run-time Engine

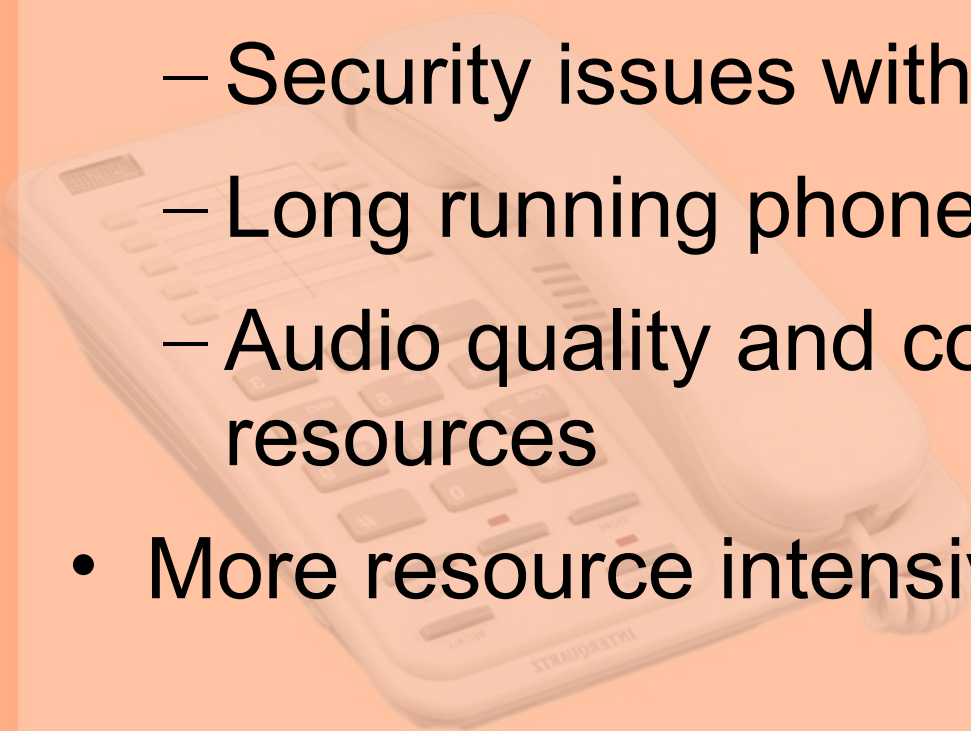
- Owned by Oracle
- Run-time engines available for every major operating system
- Issues:
  - Run-time versions consistency
  - Security issues with Java
  - Long running phone calls
  - Audio quality and connection to the OS audio resources





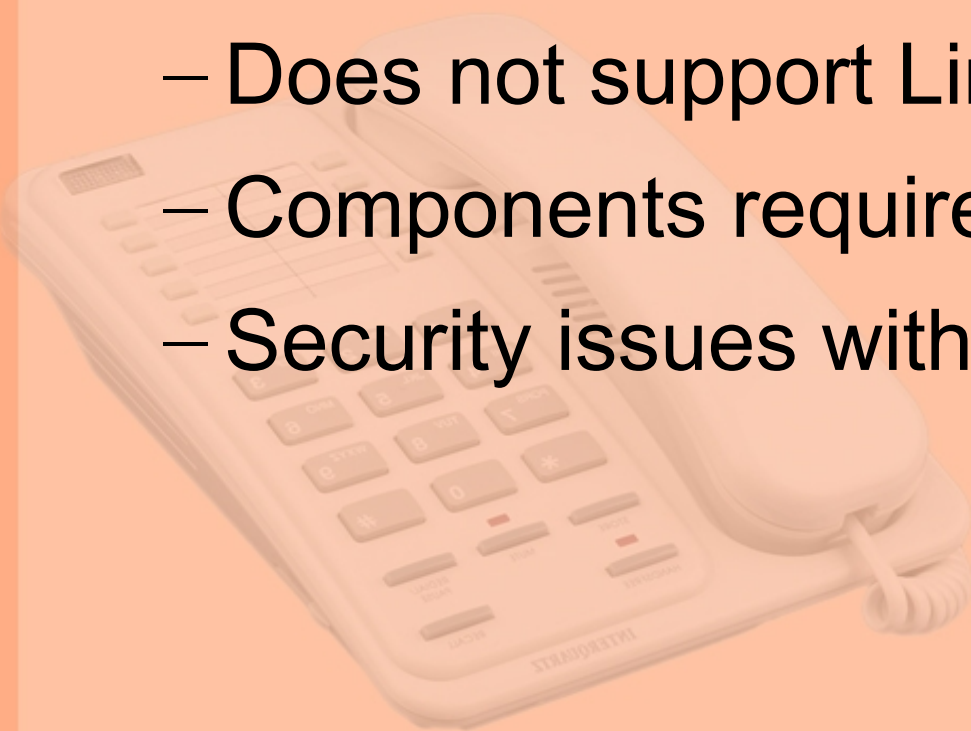
# Flash Run-time Engine

- Owned by Adobe
- Run-time engines available for every major operating system
- Issues:
  - Security issues with Flash
  - Long running phone calls
  - Audio quality and connection to the OS audio resources
- More resource intensive, requires proxy server



# ActiveX Run-time Engine

- Owned by Microsoft
- Run-time engines available only for Microsoft Operating Systems
- Issues:
  - Does not support Linux or Mac OS
  - Components require installation
  - Security issues with ActiveX





# Browser Plug-in

- Open XPI framework
- Available for every major operating system
- Issues:
  - Cross-browser support can be difficult
  - Less flexible architecture
  - Security issues



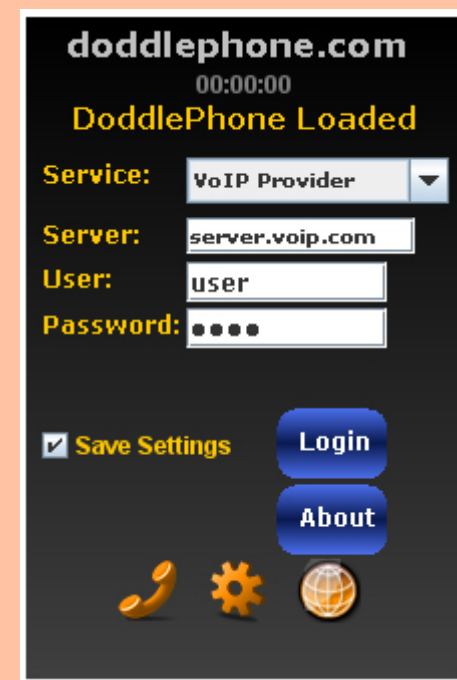
# Application Installation

- Install components on a web server
- Embed object in HTML of web page
- Flash requires a media server to transfer audio to VOIP server and SIP messages
- Agent-side allow permissions or plug-in install



# Doddlephone

- Java applet
- Allows user configuration
- Website: doddlephone.com
- Javascript API
- SIP protocol
- Codecs: G.711 / GSM / SPEEX / G.729 (royalty fees) / iLBC
- Multiple web browser support
- Windows, Linux, MacOS support

A screenshot of the doddlephone.com web interface. The interface has a dark background with yellow and white text. At the top, it says "doddlephone.com" in white, followed by a timer "00:00:00" and "DoddlePhone Loaded" in yellow. Below this are configuration fields: "Service:" with a dropdown menu showing "VoIP Provider", "Server:" with a text box containing "server.voip.com", "User:" with a text box containing "user", and "Password:" with a masked text box showing four dots. There is a checkbox labeled "Save Settings" and two blue buttons labeled "Login" and "About". At the bottom, there are three icons: a yellow telephone handset, a yellow gear, and a yellow globe.

doddlephone.com  
00:00:00  
DoddlePhone Loaded

Service: VoIP Provider  
Server: server.voip.com  
User: user  
Password: ....

☒ Save Settings Login About

Telephone handset icon, Gear icon, Globe icon

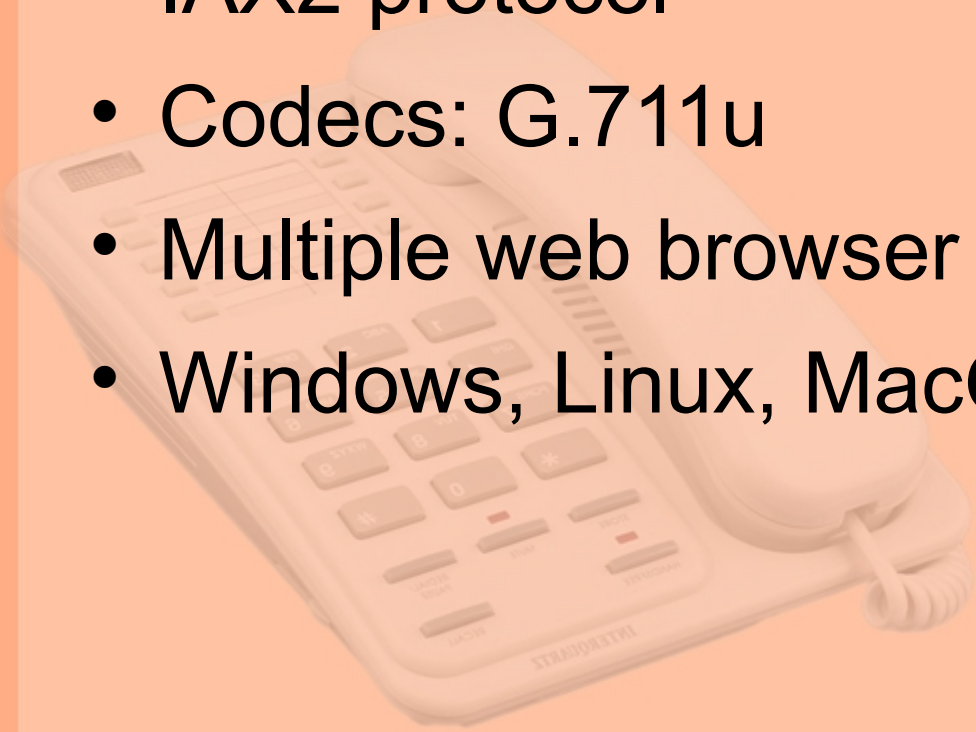
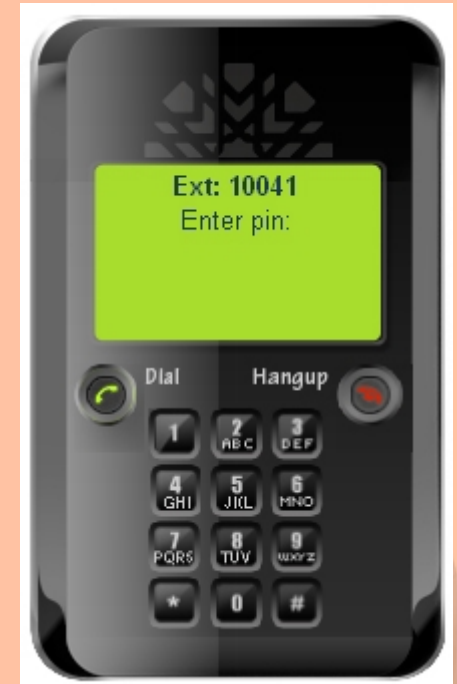
# IAX Telephone 2

- Java applet
- Allows user configuration
- Website: [silicontechnix.com](http://silicontechnix.com)
- Javascript API
- IAX2 protocol
- Codecs: G.711 / GSM / SPEEX / G.729 (royalty fees) / iLBC / lpc10
- Multiple web browser support
- Windows, Linux, MacOS support



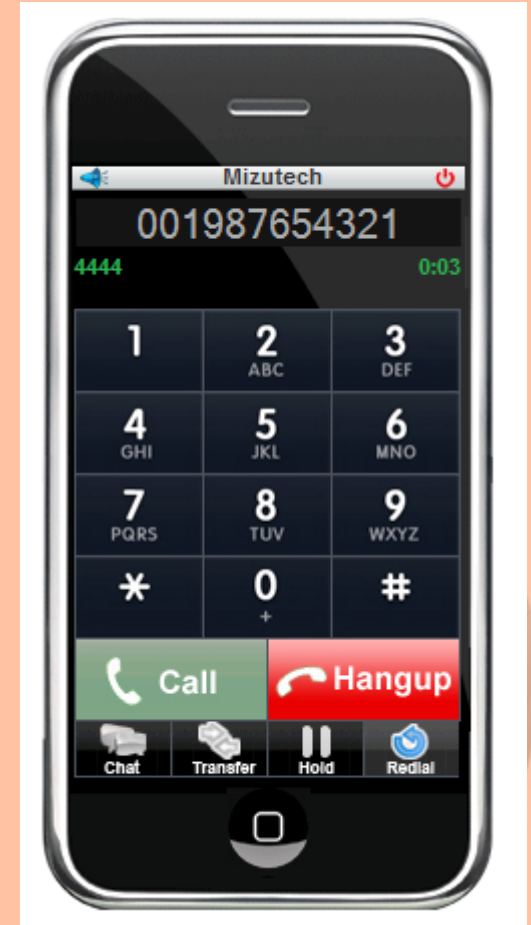
# Mexaur Webphone

- Java applet
- Website: [mexuar.com](http://mexuar.com)
- Javascript API
- IAX2 protocol
- Codecs: G.711u
- Multiple web browser support
- Windows, Linux, MacOS support



# Mizutech Webphone

- Java applet
- Website: [mizu-voip.com](http://mizu-voip.com)
- Javascript API
- SIP protocol
- Codecs: G.711 / G.729 / GSM / SPEEX
- Multiple web browser support
- Windows, Linux, MacOS support





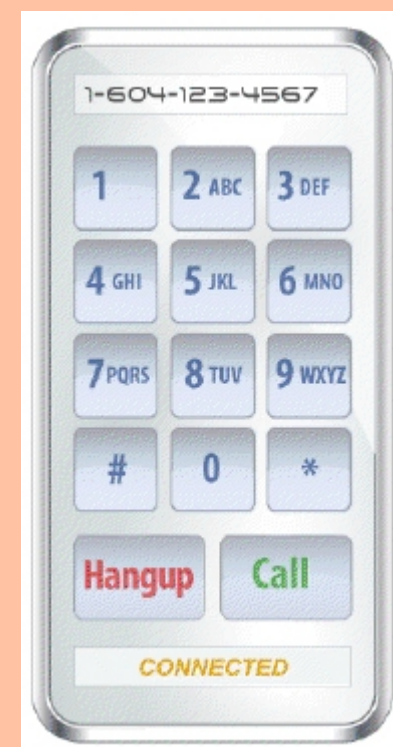
# Moziax Webphone

- Firefox plug-in
- Website: [moziax.mozdev.org](http://moziax.mozdev.org)
- Javascript API
- IAX2 protocol
- Codecs: G.711
- Firefox support only
- Windows, Linux, MacOS support
- Not under active development



# Sippy Webphone

- Java applet
- Website: [sippysoft.com](http://sippysoft.com)
- Javascript API
- SIP protocol
- Codecs: G.711 / GSM
- Multiple web browser support
- Windows, Linux, MacOS support
- Licensed per domain name, perpetual license



# TringPhone

- Flash-based
- Website: [tringme.com](http://tringme.com)
- Javascript API
- SIP protocol
- Codecs: n/a
- Multiple web browser support
- Windows, Linux, MacOS support
- Pay-per-minute for SIP calls



# Ozeki Webphone

- Flash-based
- Website: <http://www.ozekiphone.com/>
- SIP protocol
- Codecs: G711 / iLBC / G722 / G729 / SPEEX / GSM
- Multiple web browser support
- Windows, Linux, MacOS support
- Requires installation of proxy server software on a Windows server on the Internet
- Licensed per port, perpetual license



# Red5 Webphone

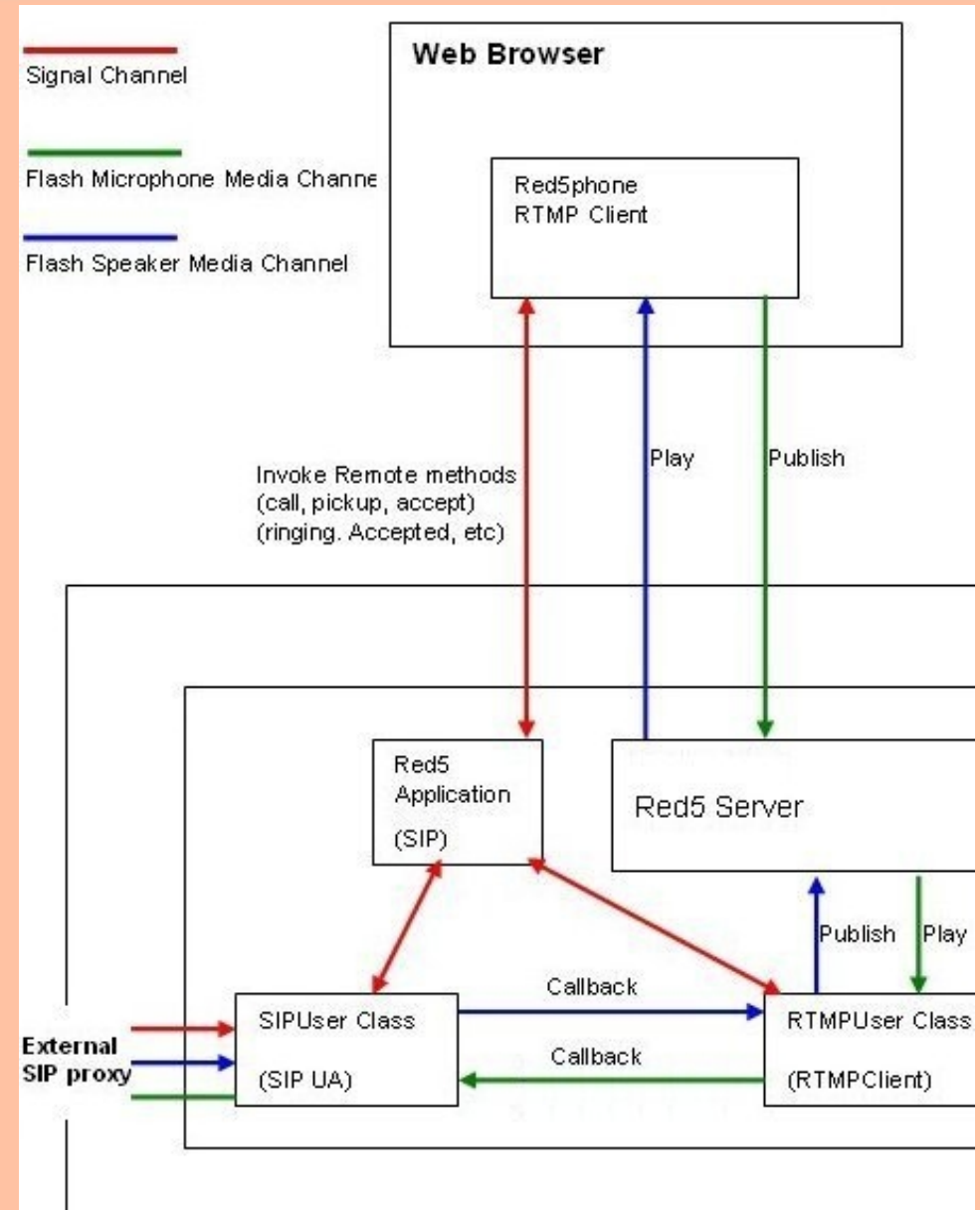
- Flash-based
- Website: <http://code.google.com/p/red5phone/>
- Javascript API
- SIP protocol
- Codecs: G711
- Multiple web browser support
- Windows, Linux, MacOS support
- Requires proxy server for media and SIP messages
- Open Source





# Red5 Webphone audio path

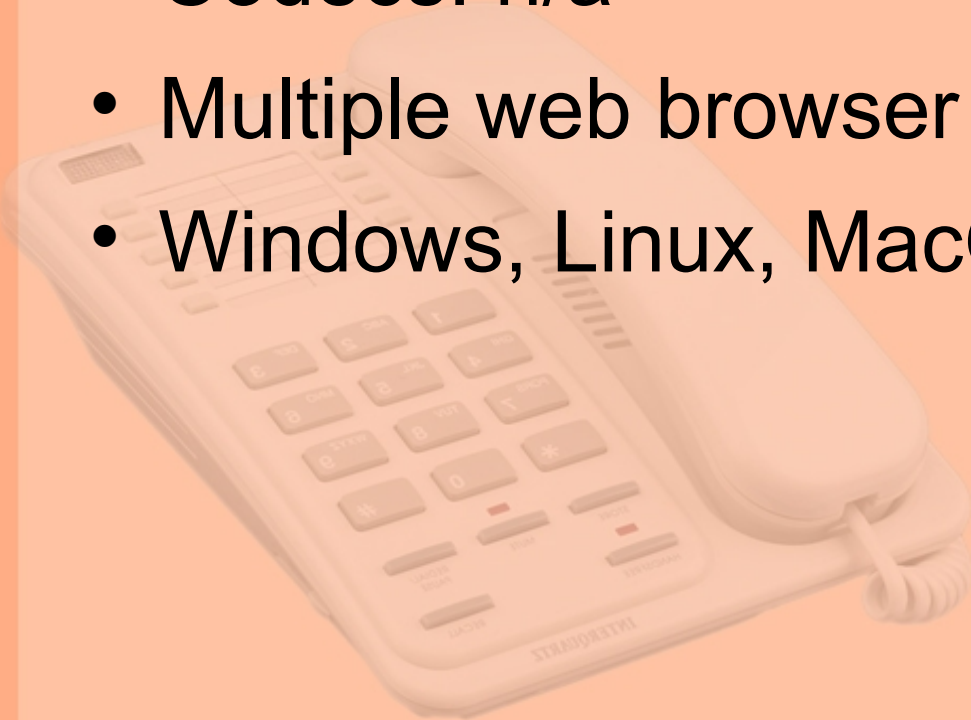
- Really RTMP audio transport, not a true webphone
- Requires server processes running to pass through audio and supply SIP messages





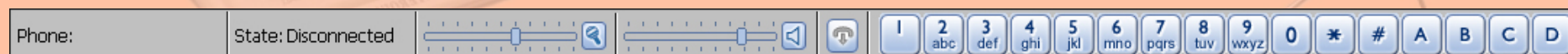
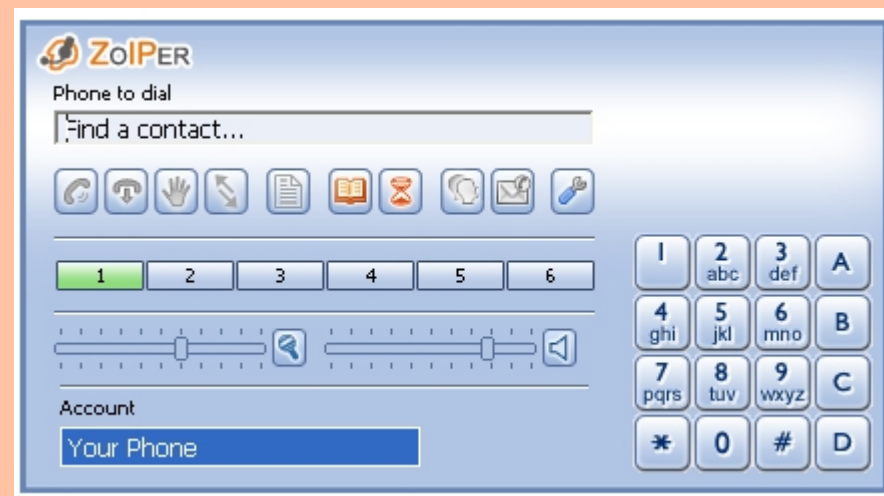
# XeniaLab Webphone

- Browser-based plug-in
- Website: [hand4shake.com](http://hand4shake.com)
- SIP protocol
- Codecs: n/a
- Multiple web browser support
- Windows, Linux, MacOS support



# Zoiper Webphone

- ActiveX and NPAPI
- Website: zoiper.com
- SIP and IAX2 protocols
- Codecs: GSM / a-law / u-law / Speex / iLBC 30 / iLBC 20
- Multiple web browser support
- Windows support only
- Licensed per domain name, perpetual license



# Webphone Applications in the Call Center

- Agent interface integration
- Live blind monitoring of calls (local or remote)
- Listening to archive recordings
- Conferencing, coaching agents
- Quality Control
- Agent Training



# Monitor Page with Embedded Phone

**VICIdial** [Users](#) [Campaigns](#) [Lists](#) [Scripts](#) [Filters](#) [Inbound](#) [User Groups](#) [Remote Agents](#) [Admin](#) [Reports](#)

Real-Time Report [Choose Report Display Options](#) [RELOAD NOW](#) [MODIFY](#) [SUMMARY](#) refresh: 4 [webphone -](#)

Phone: 0000000000 State: Established

[+ VIEW MORE](#) [HIDE USER GROUP](#) [SHOW SERVER INFO](#) [HIDE WAITING CALLS](#) [SHOW IN-GROUP STATS](#) [SHOW PHONES](#) [HIDE CUSTPHONES](#)

DIAL LEVEL: 1.327 TRUNK SHORT/FILL: 0/0 FILTER: NONE TIME: 2011-01-31 13:34:58  
 DIALABLE LEADS: 111378 CALLS TODAY: 5 AVG AGENTS: 0.14 DIAL METHOD: ADAPT\_TAPERED  
 HOPPER (min/auto): 2129/4 DROPPED / ANSWERED: 3/4 DL DIFF: 0.10 STATUSES:  
 LEADS IN HOPPER: 180 DROPPED PERCENT: 75.00% DIFF: 72.41% ORDER: DOWN  
 TEST: 1

2 current active calls 0 calls ringing 1 calls waiting for agents 0 calls in IVR  
 2 agents logged in 1 agents in calls 1 agents waiting 0 paused agents 0 agents in dead calls 0 agents in dispo

VICIDIAL: Calls Waiting 2011-01-31 13:34:58

STATUS	CAMPAIGN	PHONE NUMBER	SERVER_IP	DIALTIME	CALL TYPE	PRIORITY
LIVE	TESTCAMP	9999058829	192.168.198.5	0:12	OUT	52

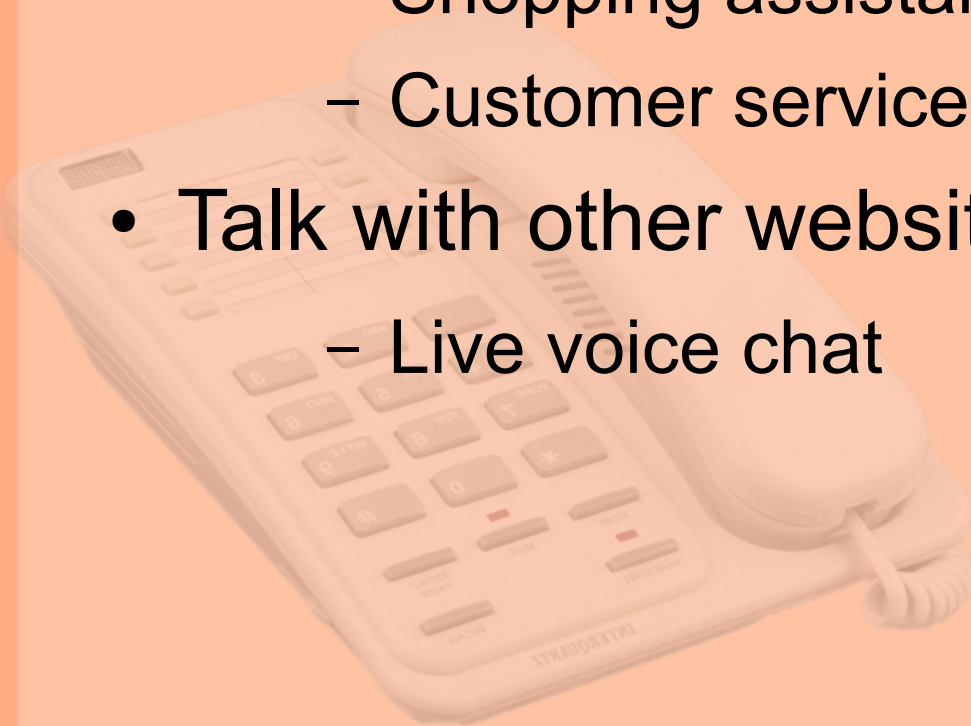
VICIDIAL: Agents Time On Calls Campaign: [ALL-ACTIVE] 2011-01-31 13:34:58

STATION	USER	SHOW ID	INFO	USER GROUP	SESSIONID	STATUS	PAUSE	CUST PHONE	MM:SS	CAMPAIGN
R/7777	testing	+	ADMIN	8300	LISTEN	READY			17947:50	ASTRICON
8300@default10	test agent	+	ADMIN	8600051	LISTEN	INCALL I		9999028042	0:10	TESTCAMP

2 agents logged in on all servers  
System Load Average: 0.22 0.11 0.03 M

# Commercial Website Applications

- No phone number needed
- No telco costs
- Click-to-call from flash-based phone
  - Shopping assistance
  - Customer service
- Talk with other website users in real-time
  - Live voice chat



# Thank you!

For more information, go to:

[www.vicidial.org](http://www.vicidial.org)

