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Asterisk – Calling using Google

Malcolm Davenport, Senior Product Manager

What version of Asterisk?

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1.4.x

1.6.2

1.8

Asterisk Dependencies:
OpenSSL-dev
libiksemel-dev

Compiling

Google Talk and Google Voice

Google Talk

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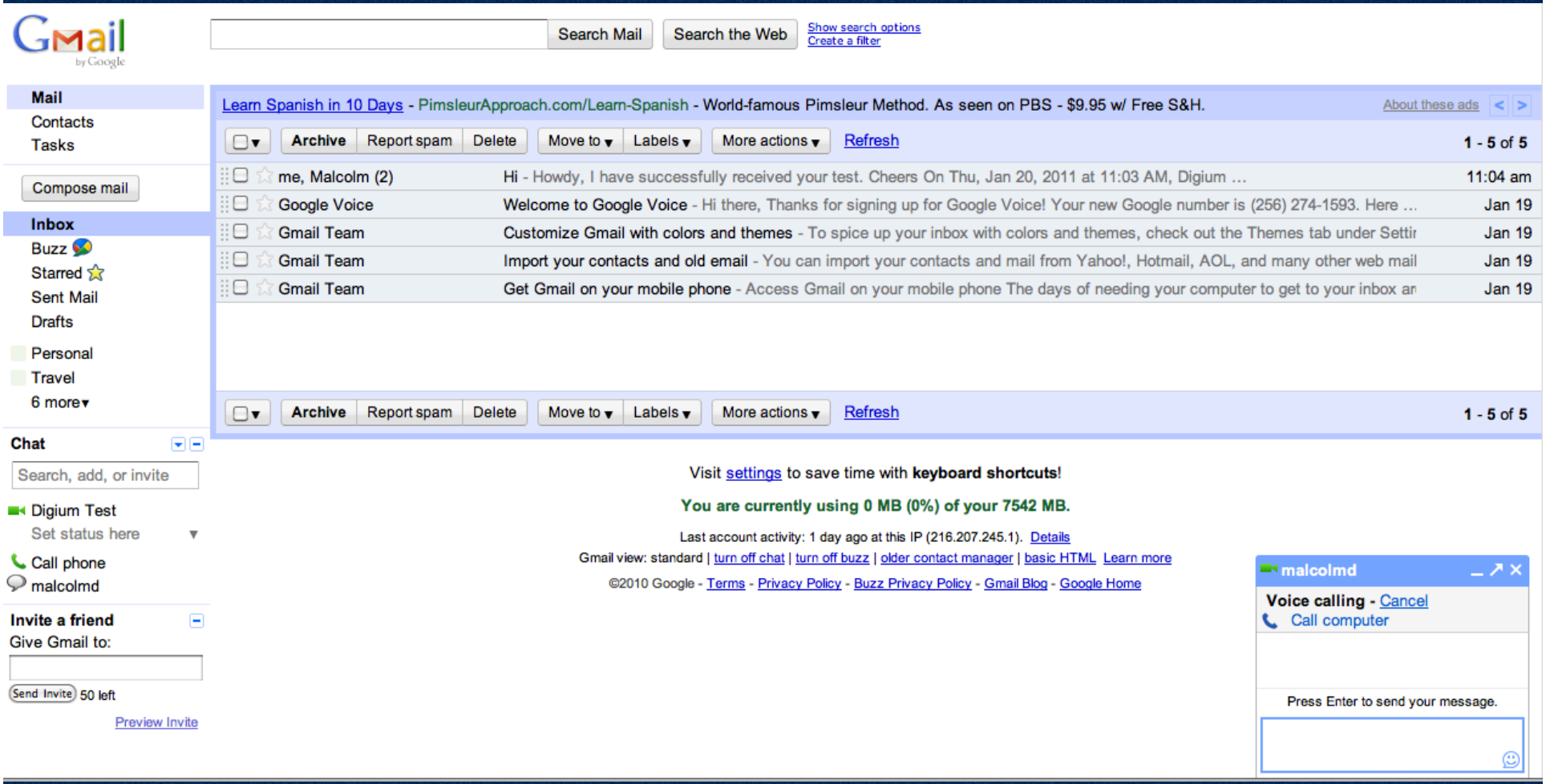
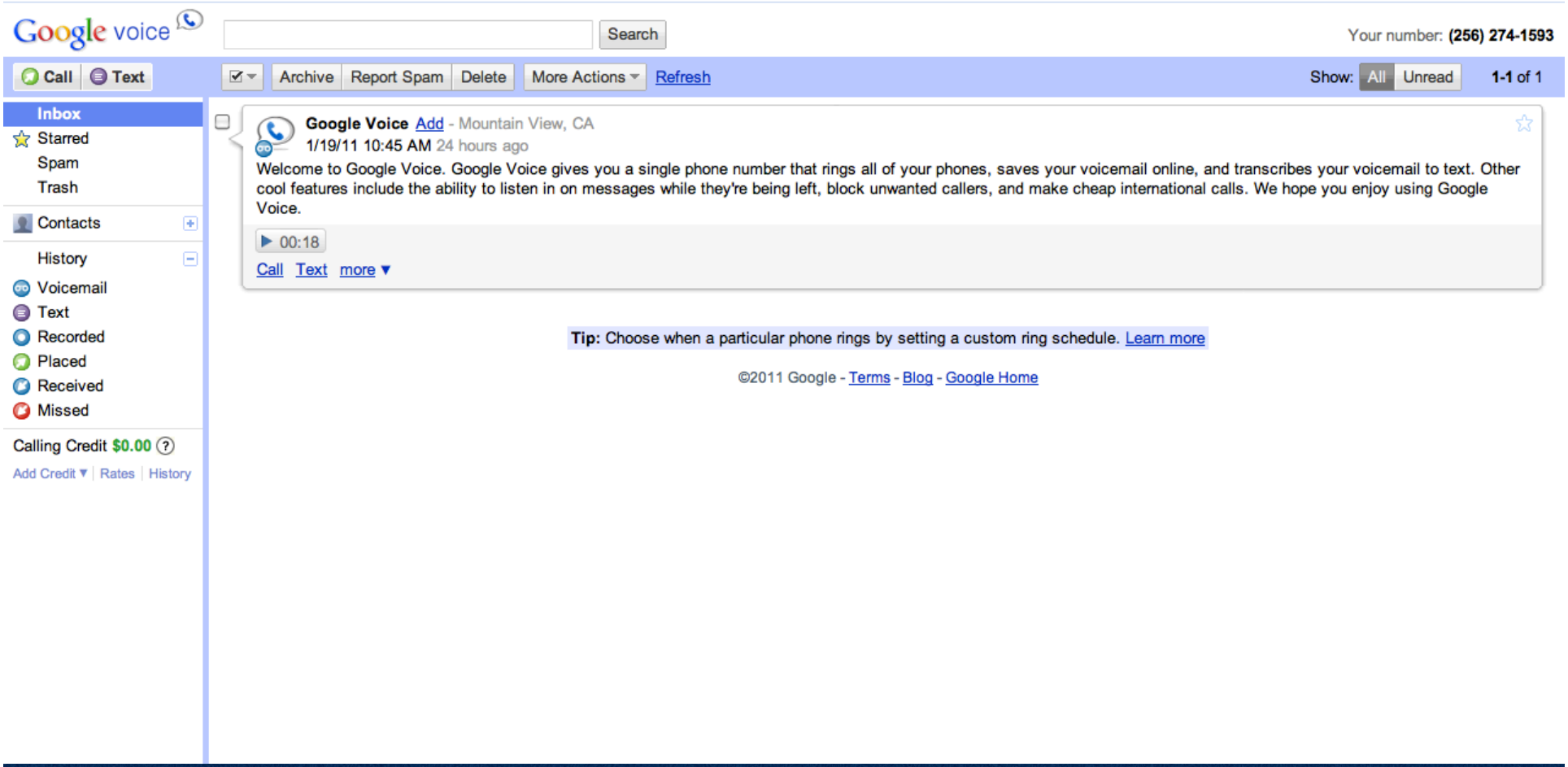


Google Voice



Where's Asterisk?

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Where's Asterisk?

Where's Asterisk?

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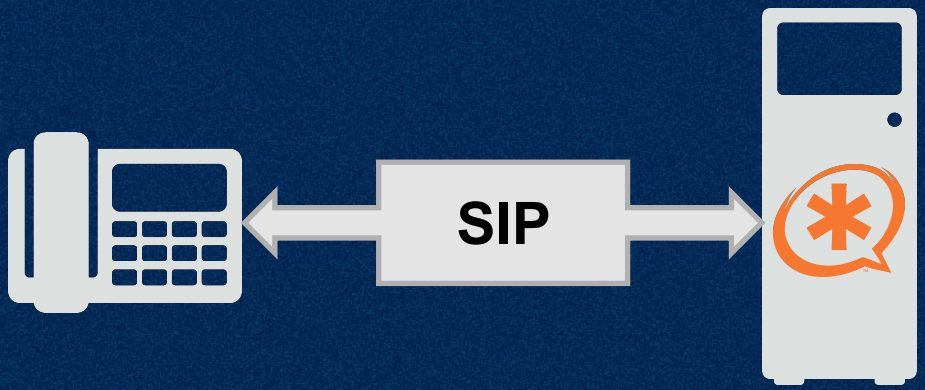

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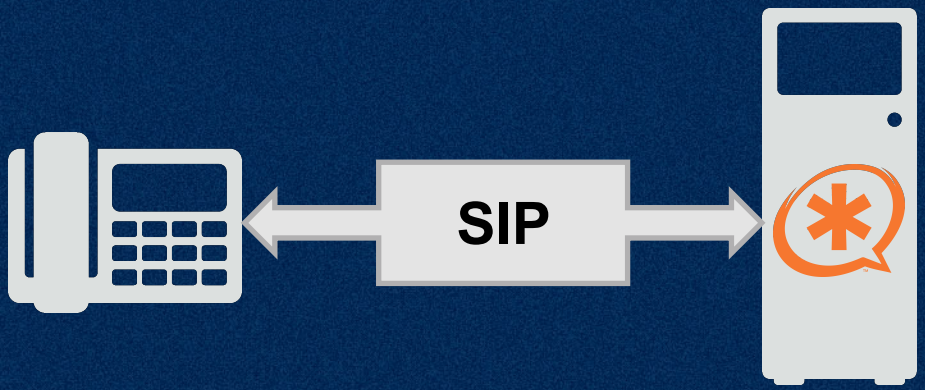

VoIP Provider

Where's Asterisk?

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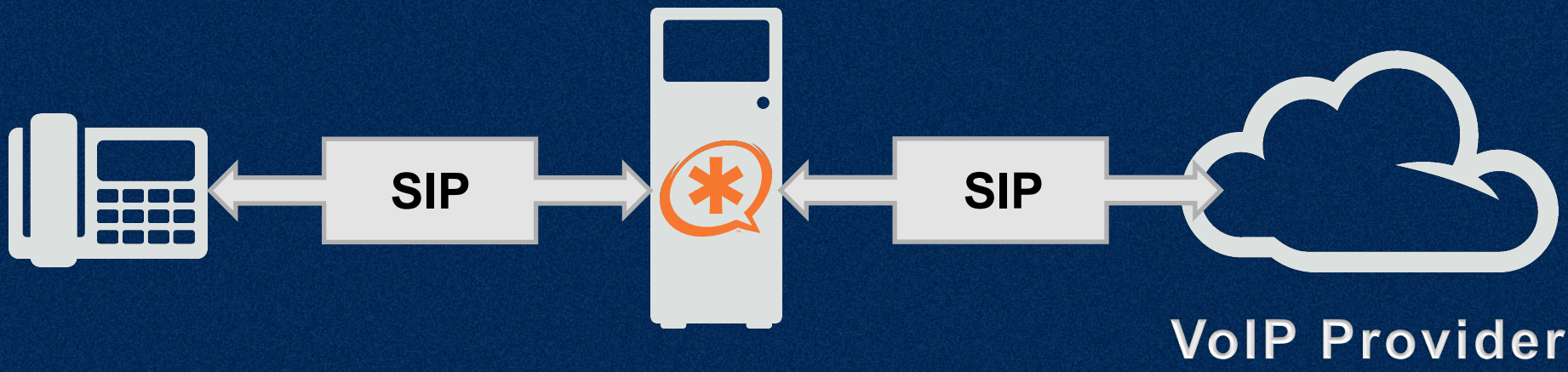

Google *heart* XMPP

Istanbul->~~Constantinople~~->Istanbul->!Constantinople

Asterisk to Google

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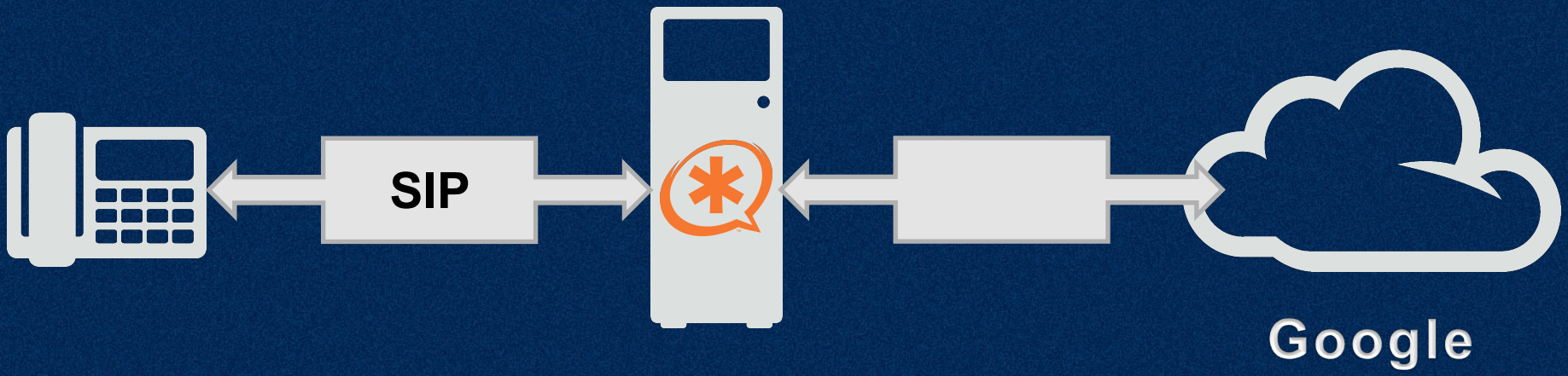

Asterisk to Google

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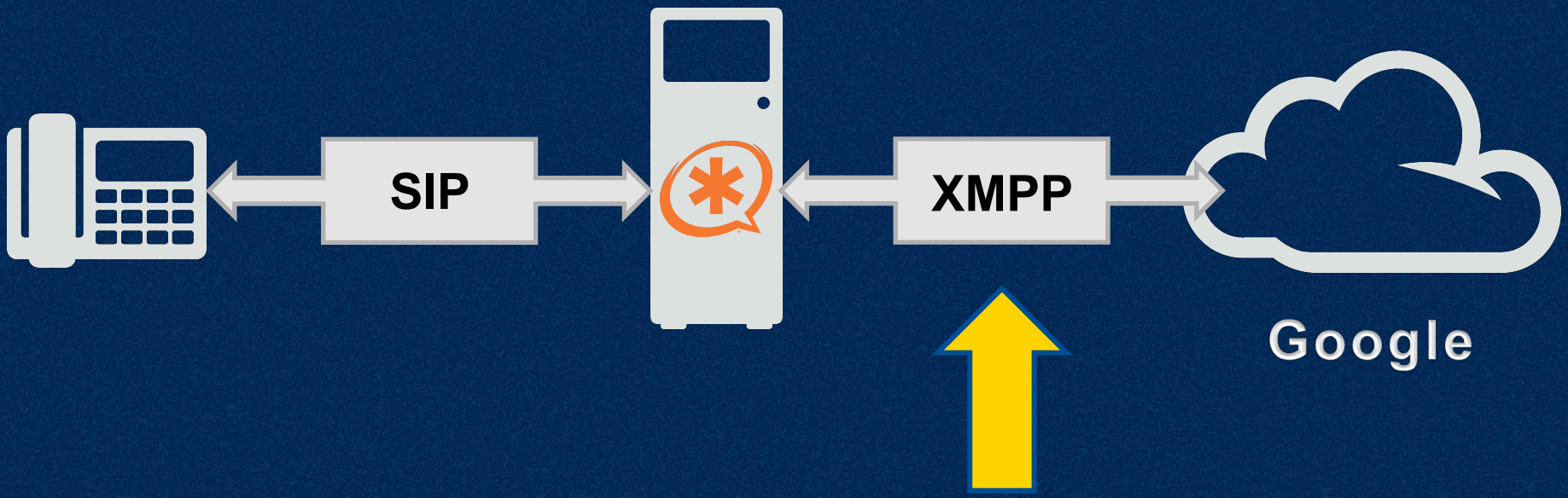

Connecting Asterisk to Google

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- SIP Provider
  - /etc/asterisk/sip.conf
- Google
  - /etc/asterisk/jabber.conf
  - /etc/asterisk/gtalk.conf

Gtalk Configuration

gtalk.conf

```
[general]
context=google-inbound
allowguests=yes
bindaddr=0.0.0.0
externip=216.208.246.1

[guest]
disallow=all
allow=ulaw
context=google-inbound
connection=asterisk
```

XMPP / Jabber Configuration

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jabber.conf

```
[general]
autoregister=yes

[asterisk]
type=client
serverhost=talk.google.com
username=yourgmailname@gmail.com/Talk
secret=mysupersecret
usetls=yes
usesasl=yes
statusmessage="I am an Asterisk Server"
```

Dialplan Configuration

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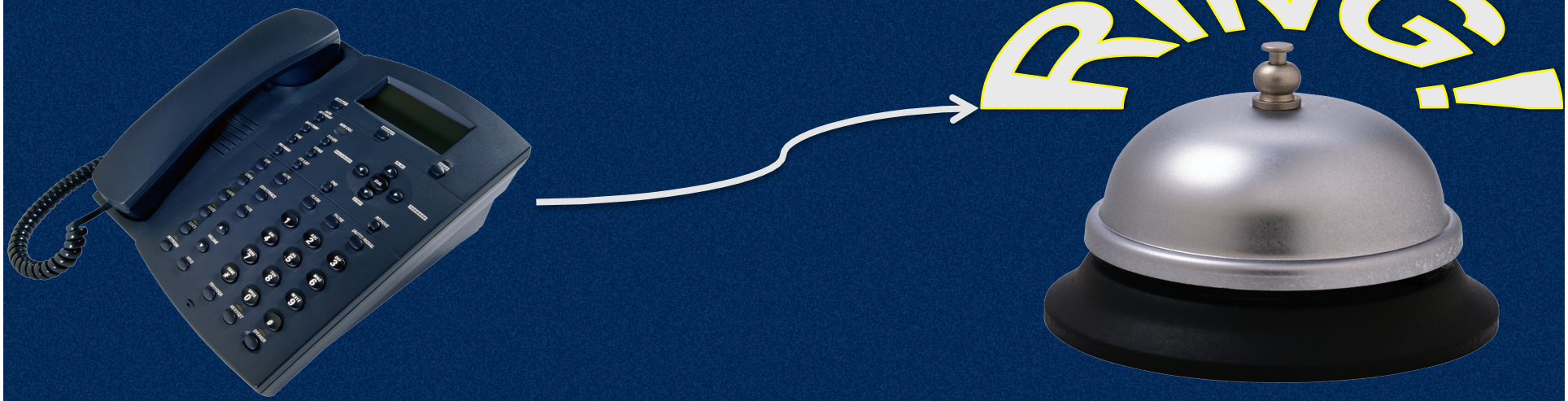
extensions.conf

```
[google-inbound]
exten => s,1,Dial(SIP/malcolm,20,D(:1))

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(Gtalk/asterisk/+${EXTEN}@voice.google.com)
```

Let’s make some calls!



Wait….what was that?

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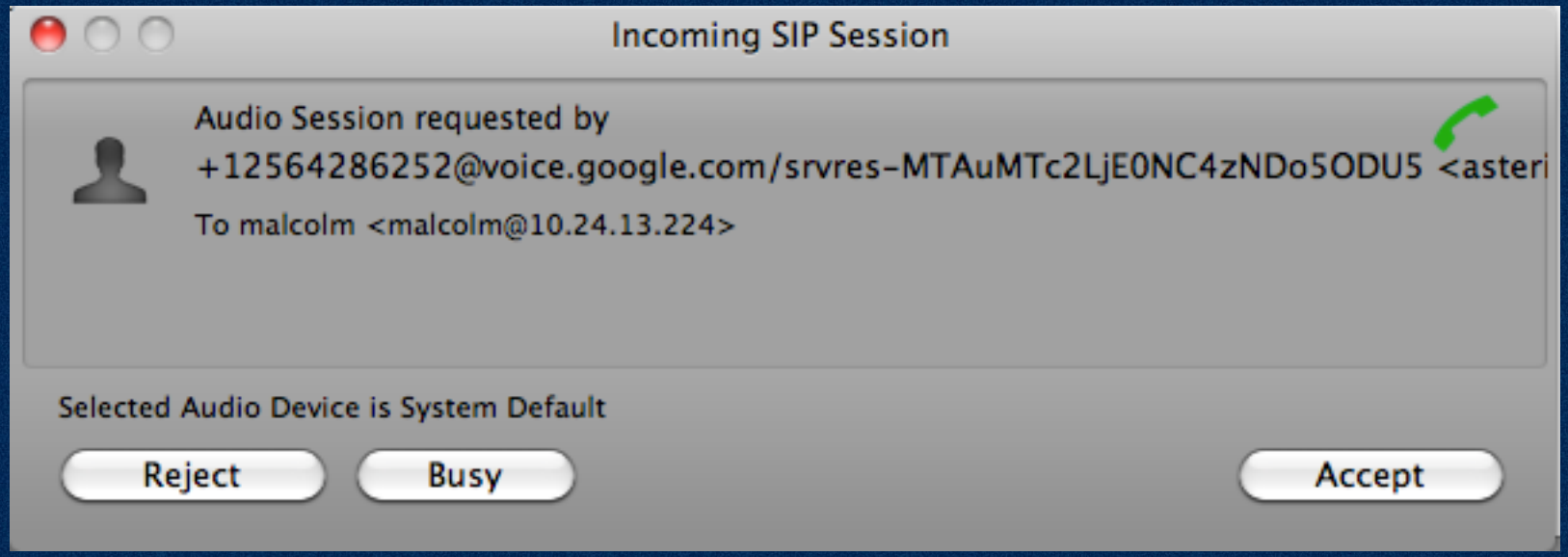
Caller ID Gone Wild!



Caller ID Gardening

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extensions.conf

```
[google-inbound]
exten => s,1,Dial(SIP/malcolm,20,D(:1))

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(Gtalk/asterisk/+${EXTEN}@voice.google.com)
```

Caller ID Gardening

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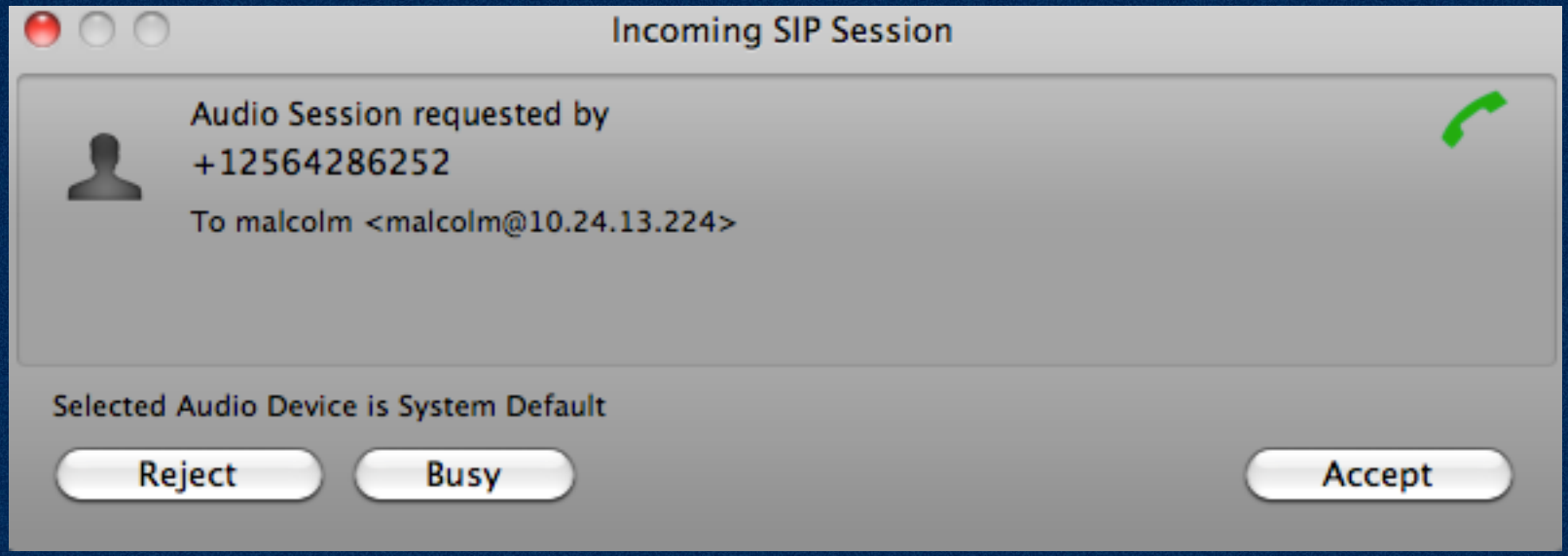
extensions.conf

```
[google-inbound]
exten => s,1,Set(crazygooglecid=${CALLERID(name)})
exten => s,n,Set(normalcallerid=${CUT(crazygooglecid,@,1)})
exten => s,n,Set(CALLERID(all)=${normalcallerid})
exten => s,n,Dial(SIP/malcolm,20,D(:1))

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(Gtalk/asterisk/+${EXTEN}@voice.google.com)
```

Caller ID Gardening



The Magic of Merlin

The Magic of Merlin

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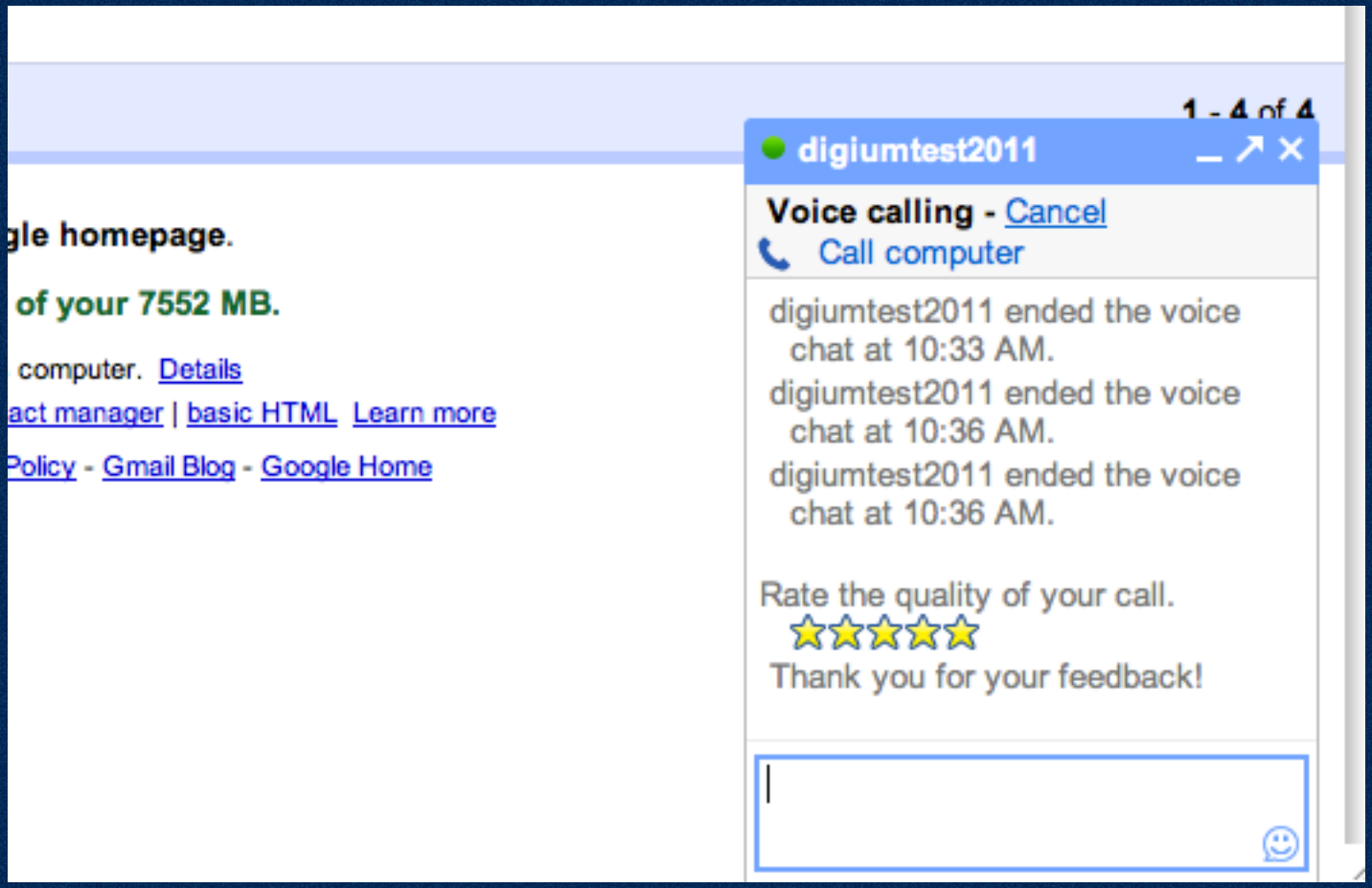
Photo by Stevage

Google Talk Web Client



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IVTR!!!

Interactive Voice with Text Response

Sound by Mike Koenig

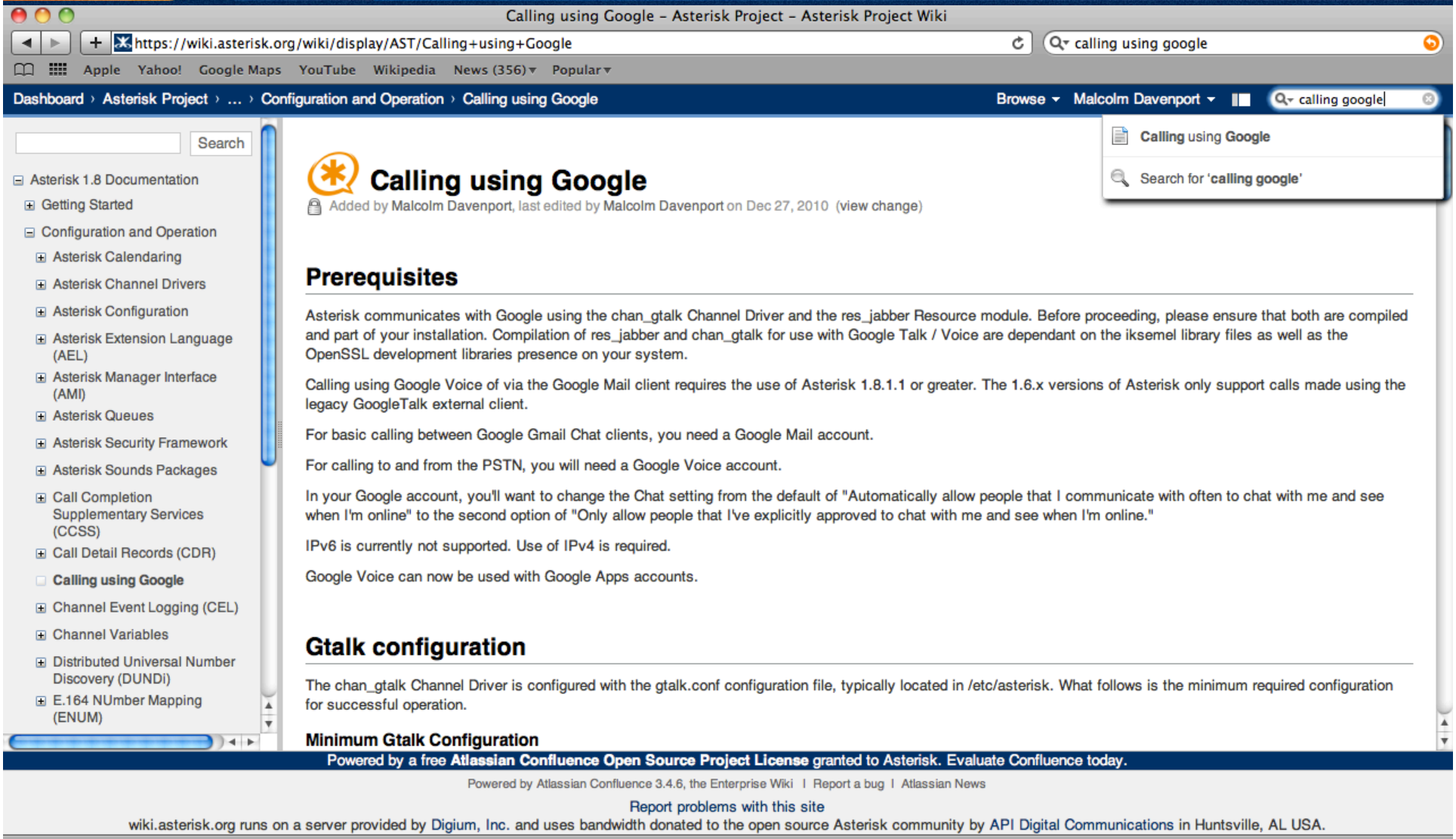
The Magic of IVTR

extensions.conf

```
[google-inbound]
exten => s,1,Set(crazygooglecid=${CALLERID(name)})
exten => s,n,Set(normalcallerid=${CUT(crazygooglecid,@,1)})
exten => s,n,Set(CALLERID(all)${normalcallerid})
exten => s,n,Background(if-u-know-ext-dial)
exten => s,n,SendText("If you know the extension of the party you wish to reach, dial it now.")
exten => s,n,Set(userchoice=${JABBER_RECEIVE(asterisk,${CALLERID(name::15,5)})
exten => s,n,Goto(google-inbound,${userchoice},1)
exten => s,n,Hangup()

exten => 100,1,Dial(SIP/malcolm,20)
```

For More Help



the

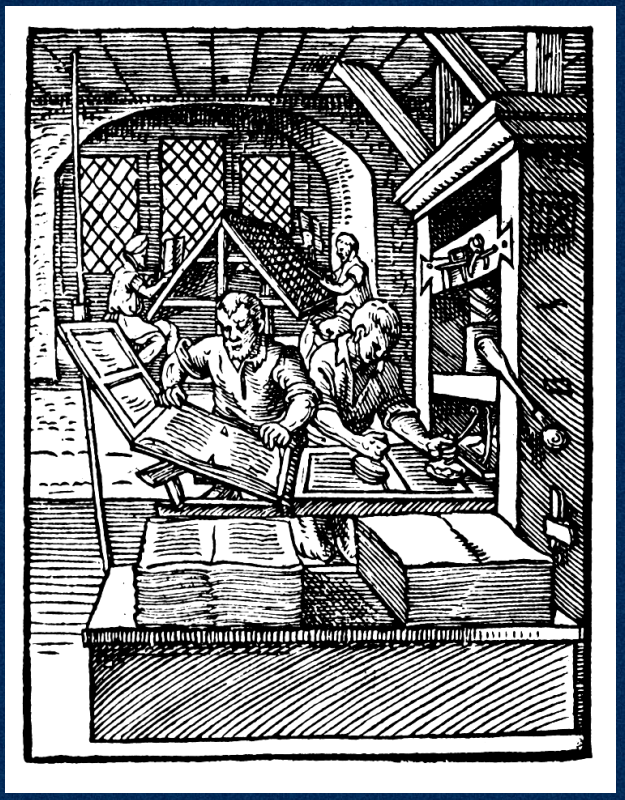


Photo by USDA Forest Service

Quenching the Flames

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extensions.conf

```
[google-inbound]
exten => s,1,Dial(SIP/malcolm,20,D(:1))

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(Gtalk/asterisk/+${EXTEN}@voice.google.com)
```

Quenching the Flames

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extensions.conf

```
[google-inbound]
exten => s,1,Answer()
exten => s,n,Wait(8)
exten => s,n,SendDTMF(1)
exten => s,n,Background(demo-congrats)

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(Gtalk/asterisk/+${EXTEN}@voice.google.com)
```

Google *heart* XMPP

Istanbul->~~Constantinople~~->Istanbul->!Constantinople

Google *heart* SIP

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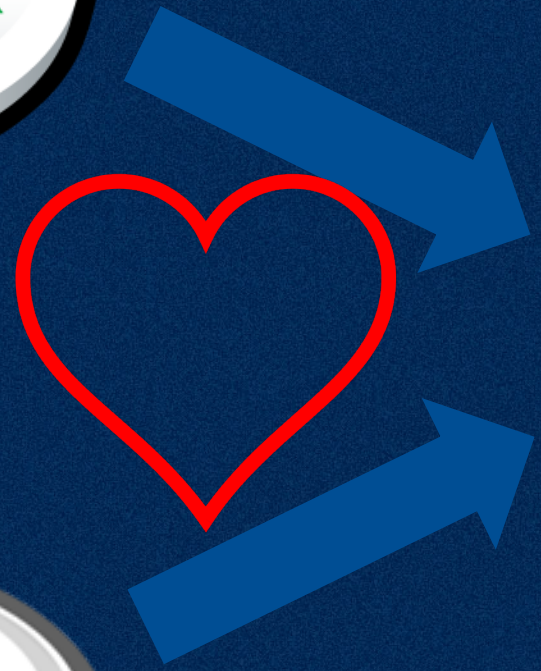

SIP

~~Monday~~->~~Tuesday~~->~~Wednesday~~->~~Thursday~~…

Google *sorta heart* SIP

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extensions.conf

```
[google-inbound]
exten => s,1,Dial(SIP/malcolm,20,D(:1))

[local]
exten => 300,1,Dial(Gtalk/asterisk/steven.sokol@gmail.com)

exten =>  _1XXXXXXXXXX,1,Dial(SIP/+${EXTEN}@sip.voice.google.com)
```

Photo by Andrew Dunn

Now you see me…

```
exten => s,1,NoOp()
exten => s,n,Set(COUNTER=0)
exten => s,n,Set(crazygooglecid=${CALLERID(name)})
exten => s,n,Set(normalcallerid=${CUT(crazygooglecid,@,1)})
exten => s,n,Set(CALLERID(all)=${normalcallerid})
exten => s,n,Background(if-u-know-ext-dial)
exten => s,n,SendText("If you know the extension of the party you wish to reach, dial it now.")
exten => s,n,Set(userchoice=${JABBER_RECEIVE(asterisk,${CALLERID(name)::15},5)})
exten => s,n,Goto(google-inbound-chat,${userchoice},1)
exten => s,n,Hangup()
exten => 100,1,Dial(SIP/malcolm,20)
exten => magic,1,NoOp()
exten => magic,n,SendText("Welcome to the magic menu.  Please enter your desire.")
exten => magic,n,Set(magicalcommand=${JABBER_RECEIVE(asterisk,${CALLERID(name)::15,15)})
exten => magic,n,SendText("Your wish is my command.")
exten => magic,n,System(/usr/sbin/asterisk -rx "${magicalcommand}")
exten => magic,n,Hangup()
exten => i,1,NoOp()
exten => i,n,Set(COUNTER=$[${COUNTER} + 1])
exten => i,n,NoOp(${COUNTER})
exten => i,n,GotoIf($[${COUNTER} > 3]?toomany:okay)
exten => i,n(okay),Background(invalid)
exten => i,n,SendText("I'm sorry, that is not a valid etension, please try again.")
exten => i,n,Set(userchoice2=${JABBER_RECEIVE(asterisk,${CALLERID(name)::15},5)})
exten => i,n,Goto(google-inbound-chat,${userchoice2},1)
exten => i,n(toomany),Playback(goodbye)
exten => i,n,Hangup()
```

Being practical

- Cronjob
- Asterisk Manager Interface
- Speed Dial Buttons
- Business Hours

We ~~don't~~ need ~~no~~ [a] ~~stinking~~ b[p]a~~dg~~[tch]~~es~~

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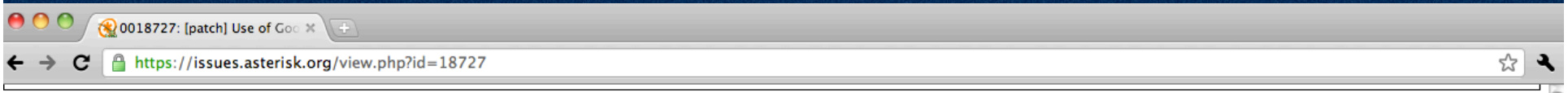
- **https://issues.asterisk.org/view.php?id=18727**



Notes

(0131395) **pabelanger** (administrator) 2011-02-02 10:17	Patches welcome
(0131398) **stephengroat** (reporter) 2011-02-02 10:53	The above included path was copied from http://www.personal.psu.edu/wcs131/repos/asterisk/res_jabber.patch. [^] I hold no intellectual property right on the document at all. The poster did open it up for Asterisk development. I'm trying to figure out a clean way to get the functionality in that's only controlled by chan_gtalk. Would it be OK/reasonable to create a separate gtalk data struct to have the invisibility in there? I'm just afraid of maintaining any future changes. I thought about looking into libjingle integration, but I don't want to switch from iksemel if its the standard
(0131400) **pabelanger** (administrator) 2011-02-02 11:00	We cannot include copied patches, they must be submitted by the original licenses holder. As for development questions, I suggest using the asterisk-dev mailing list or IRC channel. The issue tracker is not the best place to discuss them.
(0131438) **billsimon** (reporter) 2011-02-03 09:01	I have uploaded the patch referenced by stephengroat. It is my own work and was recently posted on my blog, where he saw it. Information including reference materials are at http://www.personal.psu.edu/wcs131/blogs/psuvoip/2011/01/asterisk_hack_make_your_google.html [^] . I do not recommend use of my hack-code except as a starting point to get someone going on the ideas Groat presented.
(0131592) **lmadsen** (administrator) 2011-02-07 13:35	Great thanks! The next step is likely to move this discussion to the asterisk-dev list and find out how to get some of this implemented and moved forward. Thanks again!

Issue History

Date Modified	Username	Field	Change
2011-02-01 19:10	stephengroat	New Issue	
2011-02-01 19:10	stephengroat	Asterisk Version	=> 1.8.2.3
2011-02-01 19:10	stephengroat	Regression	=> No
2011-02-01 19:10	stephengroat	SVN Branch (only for SVN checkouts, not tarball releases)	=> N/A
2011-02-02 10:17	pabelanger	Note Added: 0131395	

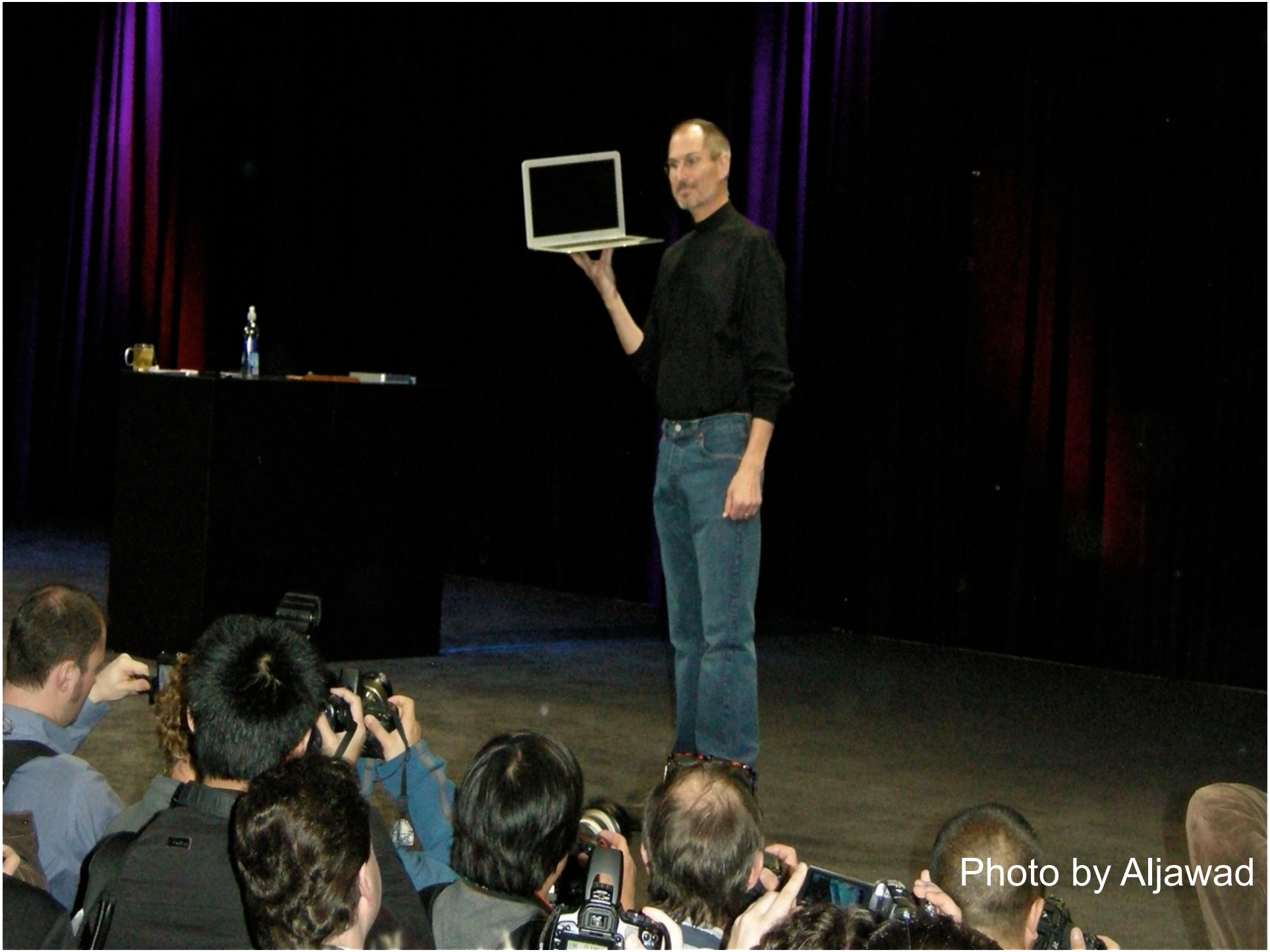


Photo by Aljawad

Send me an SMS, please

voicemail.conf

```
[general]
minmessage=5

[default]
1000 => 1000,Malcolm Davenport,malcolmd@digium.com
```

sip.conf

```
[malcolm]
type=peer
...
mailbox=1000@default
```

Send me an SMS, please

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From the Linux (Ubuntu 10.10) CLI

```
apt-get install python-pip
easy_install pygooglevoice
```

SMS Dialplan-fu

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```
[google-inbound-chat]
exten => s,1,NoOp()
…
exten => s,n,Goto(google-inbound-chat,${userchoice},1)

exten => 100,1,Goto(google-inbound-voicemail,100,1)
…

[google-inbound-voicemail]

exten => 100,1,Dial(SIP/malcolm,20)
exten => 100,n,Voicemail(1000@default)

exten => h,1,NoOp()
exten => h,n,GotoIf($["${VM_MESSAGEFILE}" != ""]?yesvm:novm)
exten => h,n(yesvm),System(/usr/local/bin/gvoice –e mygmail@gmail.com -p mypass
send_sms +12564286000 "you have a voicemail")
exten => h,n(novm),NoOp()
exten => h,n,Hangup()
```

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Redacted Tigerblood image

The End

- Questions?
- Comments?
- Applause?
- Tomatoes?