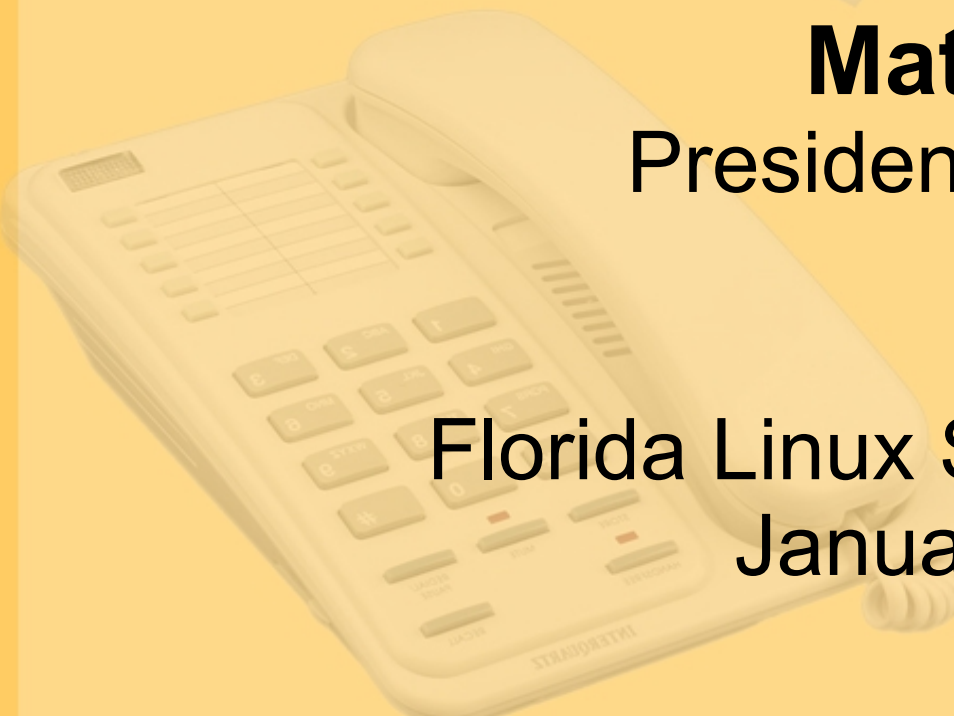


# Linux-based Phone Systems for Business

Presented by  
**Matt Florell**

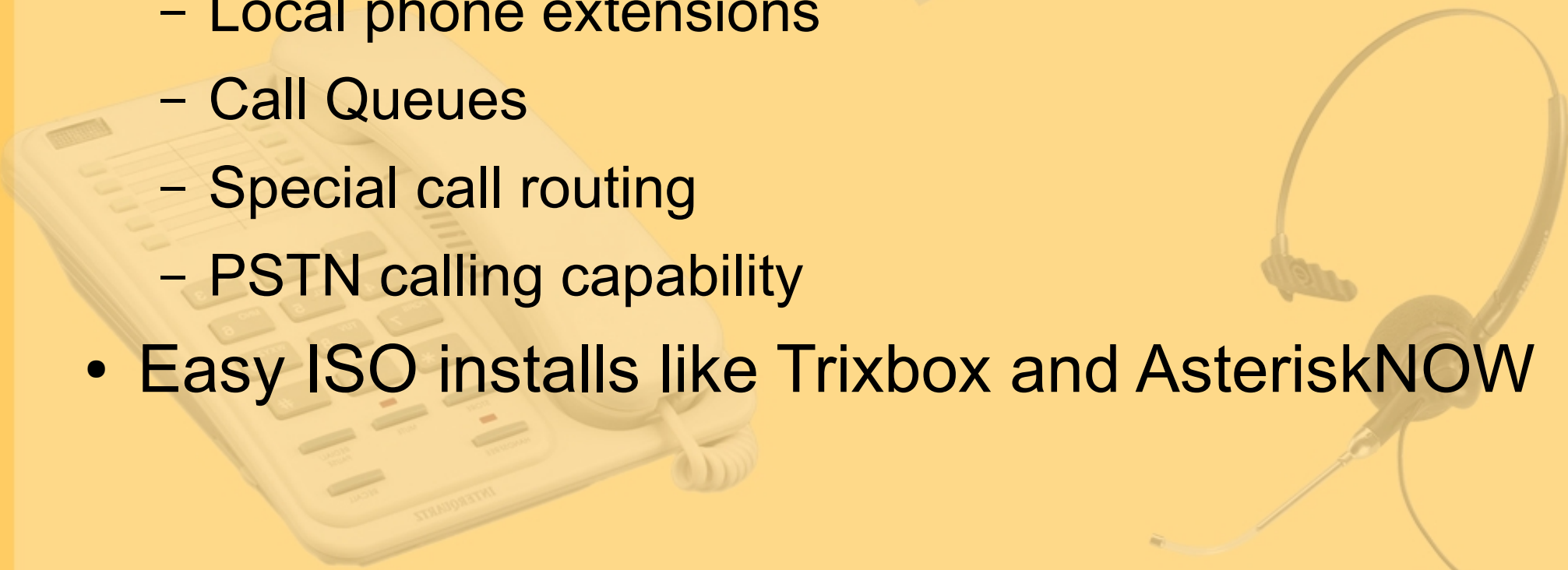
President, eflo.net LLC

Florida Linux Show \* Jacksonville  
January 11, 2008



# What is a Linux Phone System?

- Software programs that have PBX(Private Branch Exchange) features
  - Voicemail
  - Conferencing
  - Local phone extensions
  - Call Queues
  - Special call routing
  - PSTN calling capability
- Easy ISO installs like Trixbox and AsteriskNOW



# Major Linux-based PBX Software:

- Asterisk PBX - [asterisk.org](http://asterisk.org)
- CallWeaver(OpenPBX) - [callweaver.org](http://callweaver.org)
- Yate - [yate.null.ro](http://yate.null.ro)
- FreeSwitch - [freeswitch.org](http://freeswitch.org)
- SipX - [sipfoundry.org](http://sipfoundry.org)



# Asterisk PBX

- By far the most popular Linux-based telephony system, over 1 million downloads in 2007
- Full PBX functionality(voicemail, conferencing, LCR, IVR, etc...)
- Multiple trunk types: POTS, T1/E1, SIP, IAX, MGCP, SCCP, H323
- Fonality, Switchvox and trixbox: Asterisk-based
- Primary corporate contributor: Digium
- Dual-licensed(GPL and proprietary)
- Project started in 1999

# CallWeaver

- Formerly known as OpenPBX
- Fork of Asterisk 1.2 codebase
- Includes several GPL-only add-ons that are not shipped with Asterisk due to it's dual-license
- GPL licensed
- Project started 2006



# Yate

- Yet Another Telephony Engine
- Not as fully featured as Asterisk, but it is more efficient
- GPL licensed
- Project started in 2004



# FreeSwitch

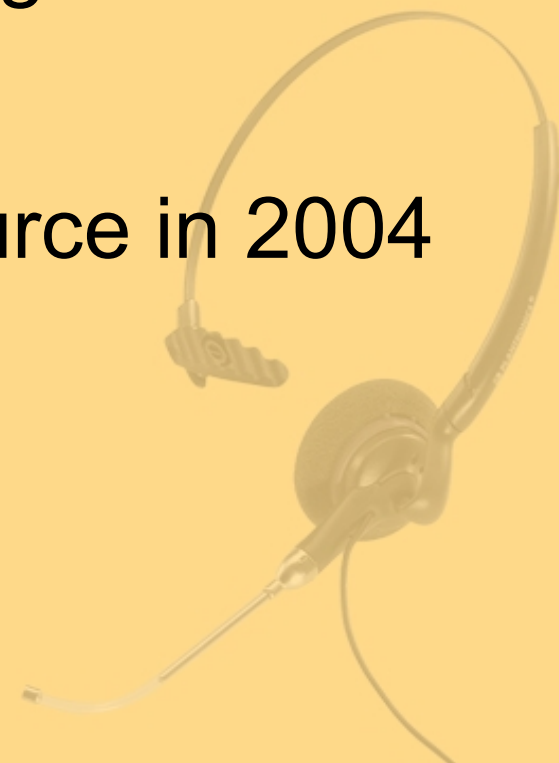
- Started from scratch by a core Asterisk developer
- Small core with modularized architecture
- MPL licensed
- Project started 2006





# sipX

- SipXecs offers a full SIP-only PBX system
- Designed to work with many 3<sup>rd</sup> party SIP gateways
- Primary corporate contributor: Pingtel
- LGPL licensed
- Project started in 1999, Open-Source in 2004





# Big Corporations Selling Asterisk-Based Appliances

- **3com** – solid-state PBX appliance designed by Digium
- **Dell** – Trixbox appliance designed by Fonality
- **NTT Japan** – PBX appliance designed in-house



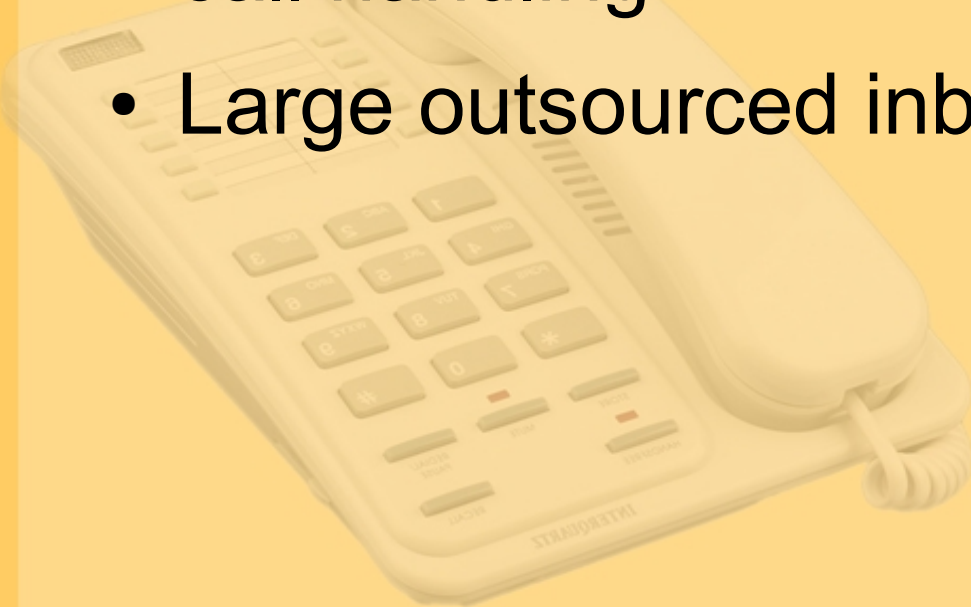
# Major Asterisk Installations

- **Vonage** – Asterisk used for 1,000,000+ voicemail accounts
- **VoicePulse** – VOIP provider using Asterisk for tens of thousands of customer accounts
- **Sam Houston University** – 6,000 student University using Asterisk for all telephony services



# Case Studies for Asterisk PBX

- Financial Services company
- Marketing company expanding
- Marketing company PBX end-of-life'd
- Health services company moving to automated call handling
- Large outsourced inbound call center



# Financial Services Company

- Call Center, 24 seats inbound, 3 call groups
- Existing system had no computer integration
- Wanted screen pop from CallerID to their CRM
- Proprietary system was quoted at \$2000/seat
- Asterisk/VICIDIAL solution total cost was \$400/seat



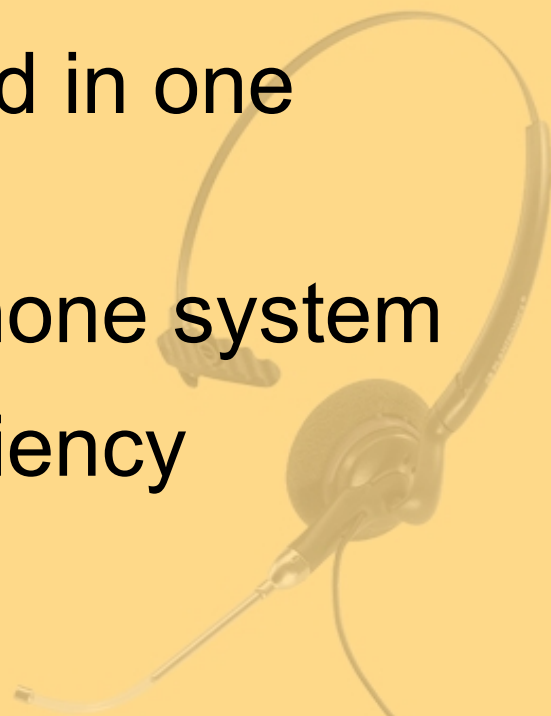
# Marketing Company Expanding

- Had existing 24 seat contact center PBX
- Needed to grow to 200 seats
- Quoted prices of \$2500/seat
- Asterisk/VICIDIAL solution price: \$300/seat



# Marketing Company PBX EOL

- Existing 4-server Phone systems with 120 phones
- No connection between systems
- Manufacturer stopped servicing equipment
- Asterisk/VICIDIAL solution installed in one month
- In-house staff now maintain the phone system
- 10% increase in call handling efficiency





# Health Services Company

- Existing 75-phone system only allowed manual phone calls, no CTI
- Wanted to integrate outbound dialing system with internal CRM
- Started dialing outbound and taking inbound blended together on Asterisk/VICIDIAL with great results





# Outsourced Inbound Call Center

- Needed capacity of 500+ inbound agent seats
- Quoted \$4000/seat on Proprietary solution
- Moved to Asterisk with internal system control and maintenance
- System allows for a great deal of flexibility



# OSS PBX Benefits

- 70-90% initial cost savings
- Internal control of code
- No end-of-life
- Wider compatibility with other components and systems



# Thank you!

To see this presentation online, go to:

[www.eflo.net](http://www.eflo.net)

