Beyond the Web

using VoIP technologies to expand Drupal sites (and vice-versa)

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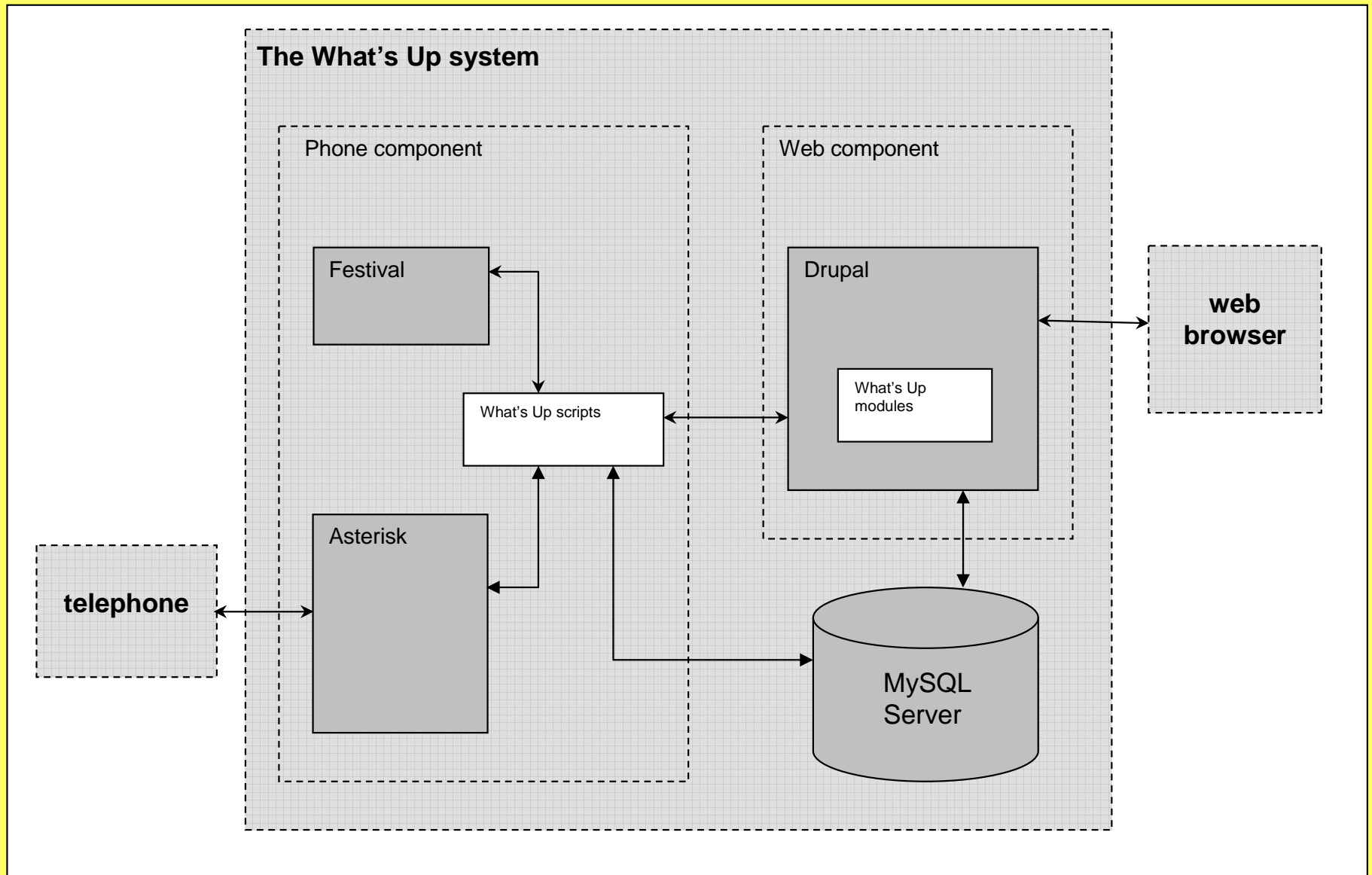
Can technology help change this situation?

demo

The What's Up system

What's Up *is a telephone-based, neighborhood news system that will make it easier for youth to collect, share, and analyze information about personally meaningful places, people, and opportunities in their neighborhoods.*

By dialing a central number, youth will be able to send and receive personal messages, publish community announcements, create voicemail groups and find out what is happening in their communities.

System architecture

The What's Up system

Phone component

Festival

What's Up scripts

Asterisk

telephone

Web component

Drupal

What's Up modules

web browser

MySQL Server

Asterisk, the open source pbx

make and receive VoIP calls

read keypad input

record and play audio files

handle dialplan extensions and contexts

voicemail, conferencing, billing applications

call shell scripts

Sample dialplan

```
[from-gizmo]
exten => s,1,NoOp(${CALLERID})
exten => whatsup,1,Goto(default,s,1)            ; goto default


[from-voicepulse]
exten => _16177153509,1,Goto(default,s,1)    ; local number
exten => _18664606602,1,Goto(whatsup,s,1)  ; toll-free number


[whatsup]
exten => s,1,Wait,1    ; Wait a second
exten => s,n,Answer    ; Answer the line
exten => s,n,Set(TIMEOUT(digit)=3)              ; set digit timeout to 3 seconds
exten => s,n,Set(TIMEOUT(response)=10)      ;  set response timeout to 10 seconds
exten => s,n,AGI(whatsup-472/whatsup_main.agi.php)     ; call what's Up
exten => s,n,NoOp("WU_RESULT set to ${WU_RESULT}")
exten => s,n,Hangup
```

What's Up modules (and libraries)

audio_xmlrpc.module	xml-rpc api to audio.module
voip.module	phone login, extensions, call history
voip_voicemail.module	voicemail
voip_group.module	user groups, group voicemail
voip_event.module	calendar events
voip_poll.module (*)	community polls
voip_statistics.module (*)	Usage statistics
other	phone calls, conferences, sms, etc.

The Drupal advantages

user and content management

web interface

lots of useful modules already implemented

friendly community

Technical challenges

lack of basic Asterisk, Drupal documentation

dependency on too many modules

lack of clear APIs

HTML / forms / themes embedded in the code

combine real-voice with text-to-speech

meaningfully integrate audio with web pages

What's Up 2.0 features

multi-language interface

event subscription

personal buddy lists, audio notes and calendar

location-based calls and queries

social-network visualization

Immediate help needed

port eventfinder.module to 4.7

function to send email with file attachments

easy way to upload audio files from existing forms

webpages for users and groups

graphic designer for logo, themes and support materials

overall usability testing and feedback

For additional information

"Asterisk: the future of telephony" (O'Reilly 2005)

www.voip-info.org

www.asteriskguru.com

phpagi.sourceforge.net

www.digium.com

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