



Broward County Convention Center

*Fort Lauderdale, FL
January 24-27, 2006*

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VOIP 2.0

How To Add Voice to Your Web Community

Checklist for VoIP Technology

Slava Borilin

VoIP Products Director

SPIRIT



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Why SPIRIT

- 10+ years, 120 people
- Focus on voice processing solutions
- Powers 80M voice channels in 70 countries, 200+ customers

SPIRIT provides VoIP for collaboration –
TeamSpirit™ Voice Engine

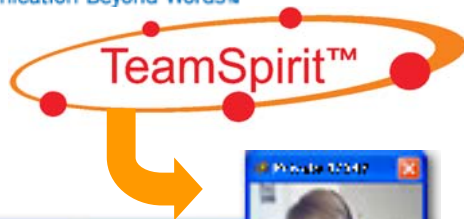


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Voice in multi-point communities



TeamSpirit™ enhances the voice quality of Paltalk voice and video conferencing community.

About Paltalk:

PalTalk is a world's leading provider of live communications over the Internet

- 25 million registered users
- over 140 countries
- carrying over 8 billion voice minutes per year
- PalTalk is compatible with MSN, AOL, Yahoo! and ICQ Messengers.



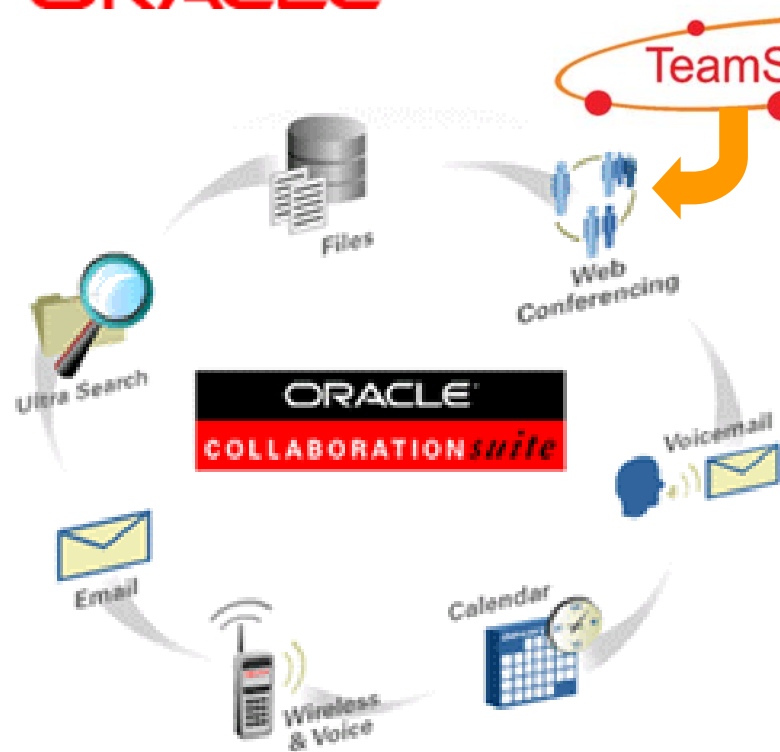
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Voice in enterprise collaboration

ORACLE



TeamSpirit™ is used as a voice layer inside Oracle Collaboration Suite and provides hands-free multi-point VoIP conferencing

About oracle Collaboration Suite:

Oracle Real-time collaboration is the only secure, presence-aware, integrated enterprise platform designed to meet all the real-time needs of an enterprise.

*With **data, voice and video** capabilities Oracle RTC enables individuals and groups to detect presence, meet, communicate and collaborate with each other in seamless and unified manner*



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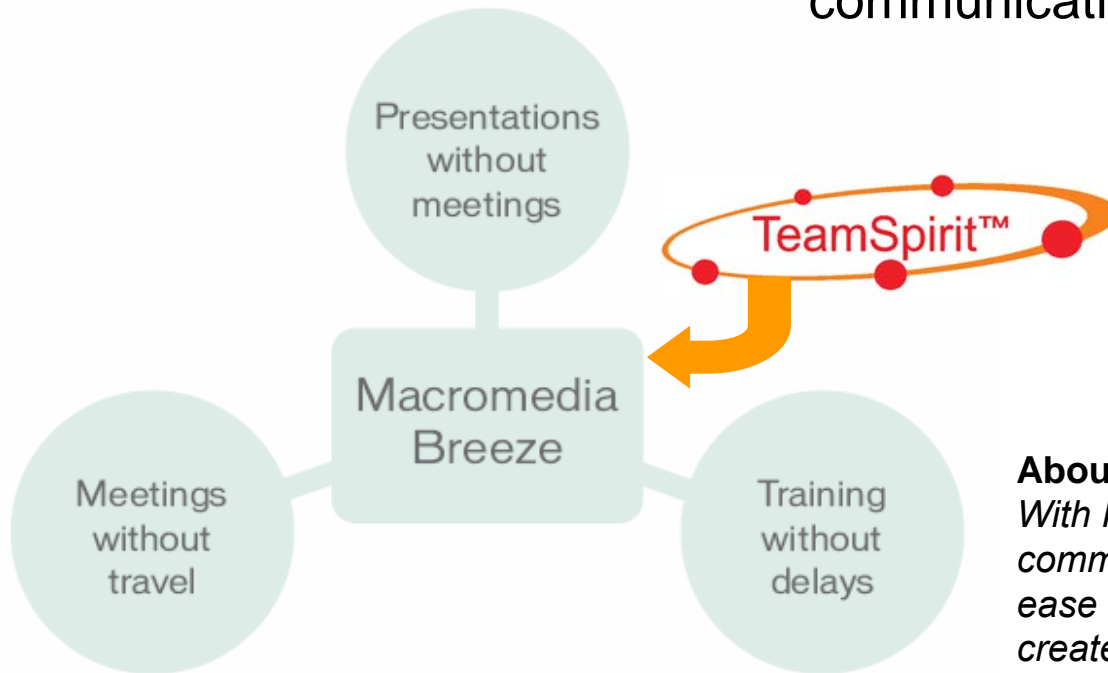
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Voice in online trainings



TeamSpirit™ is implemented as a voice engine in Macromedia® Flash application Breeze™ targeted for collaboration, communication and online trainings



About Macromedia Breeze:

With Macromedia Breeze, organizations can communicate, collaborate, and train online with ease - Breeze includes everything needed to create, manage, deliver, and track rich communications.



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Voice on mobile devices

HTC
Engineering Mobility



TeamSpirit™ product runs on mobile devices, and provides high-quality voice/video conferencing in wireless devices - one of the latest deployments is first Windows Mobile 5.0 - based 3G Videophone by HTC (largest Taiwan cellular OEM)



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Voice in web communities



- Voice as a phone -> VoIP as a phone (PC softphone)
(MSN, Google, Yahoo, AOL)
 - Free PC-2-PC calls
 - PC-2-PSTN paid calls (\$20/month, and goes down)
- Still searching for working business models
- Integration of Voice and Applications continues strongly
- Voice keeps on penetrating web communities
- Voice in communities is MORE THEN JUST A PHONE



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E-Commerce (V-Commerce)

unparalleled ecommerce and communications engine for buyers and sellers around the world

LARGE-SCALE:

“ecommerce communications could be monetized on a pay-per-call basis through Skype”

- release on eBay acquisition of Skype

SMALL-MEDIUM BUSINESS:

Voice-centric collaboration and business tools
(www.voice-commerce.com)

Voice is not essential of the service, but makes it much more efficient

Many SMB use Skype, but wish it be more business-oriented

SPIRIT DSP
Embedded Voice Experience 

eBay[®]

skype[™]



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Training / E-learning / Consulting

Voice conversation is an essential part of the service

Learning English on-line
7M people, 39 euros/ month
<http://englishtown.com>

Legal consulting – 2.6M calls/year
<http://www.prepaidlegal.com>

Voice in working-from-home potential is also enormous.



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Voice in web communities



- From Voice to Collaboration (doc sharing, joint web browsing) for e-commerce, customer care, trainings, discussions.
- From p2p to multi-point (e-learning, auctions, peering)
- For c2c and b2c (support both live PC talks, PSTN, IVR)
- Wider access (from Web/PC, Fixed/Mobile)
- Must be smoothly scalable – from small p2p to large-scale cost-effective systems

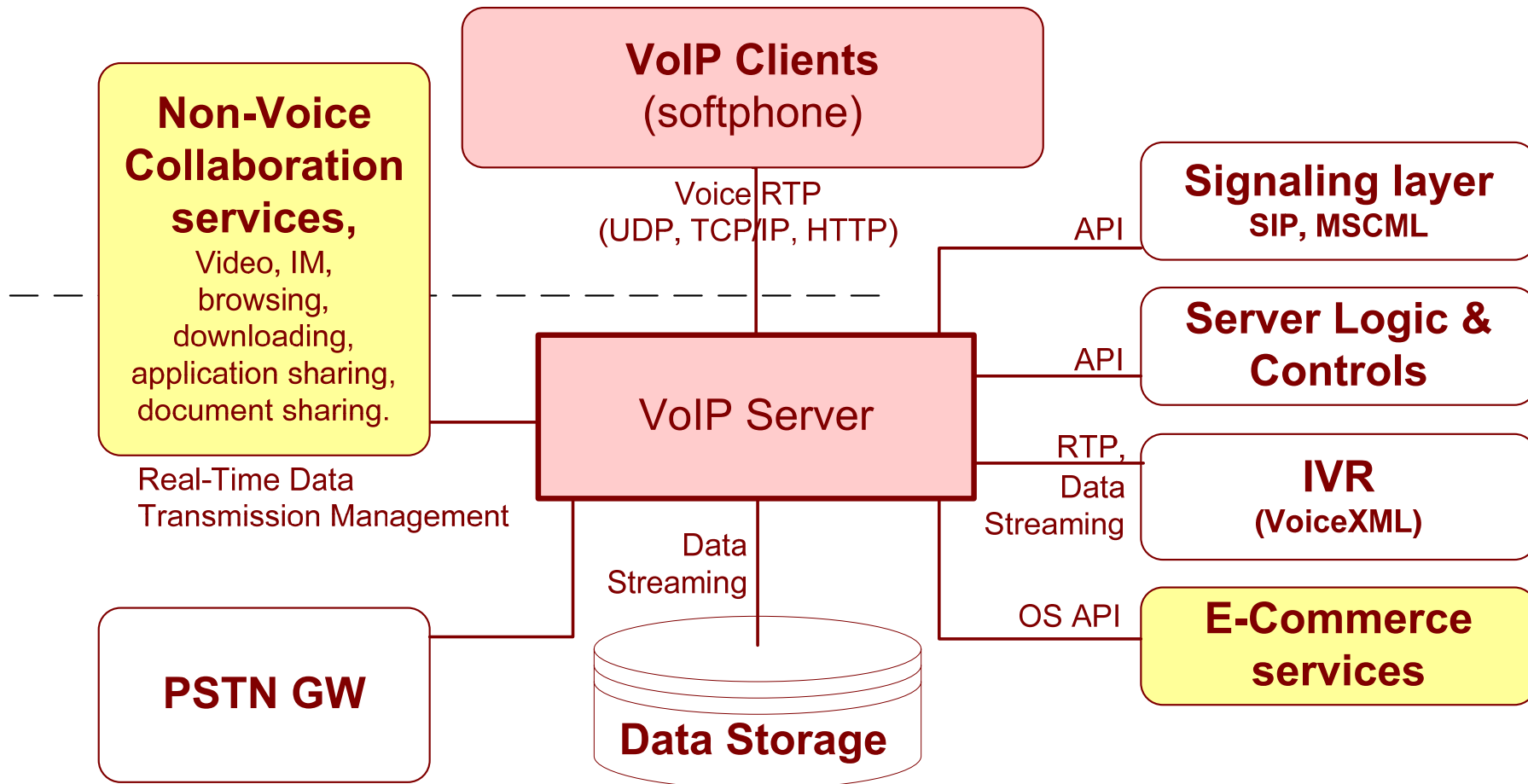


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Voice is no longer standalone



Implementing Voice - Checklist



- Support common communication scenarios:
Calling, ad-hoc Conferencing, multipoint conferencing,
one-to-many broadcasting
- Integration with Applications/Data
- Costs Control for community provider
- Voice quality
- Both consumers and enterprise users participate
(integration with existing infrastructure IP-phones, PBX)
- Cross-platform access (Desktop, Web, PDA)

Target: ease of use, quality,
BUT integrated, secure, under Service Provider control



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Daily Scenarios, Cost-effective

Basic Call

True multipoint conferencing
(spontaneous, frequent
collaboration by voice)

Conferencing
(scheduled multi-point)

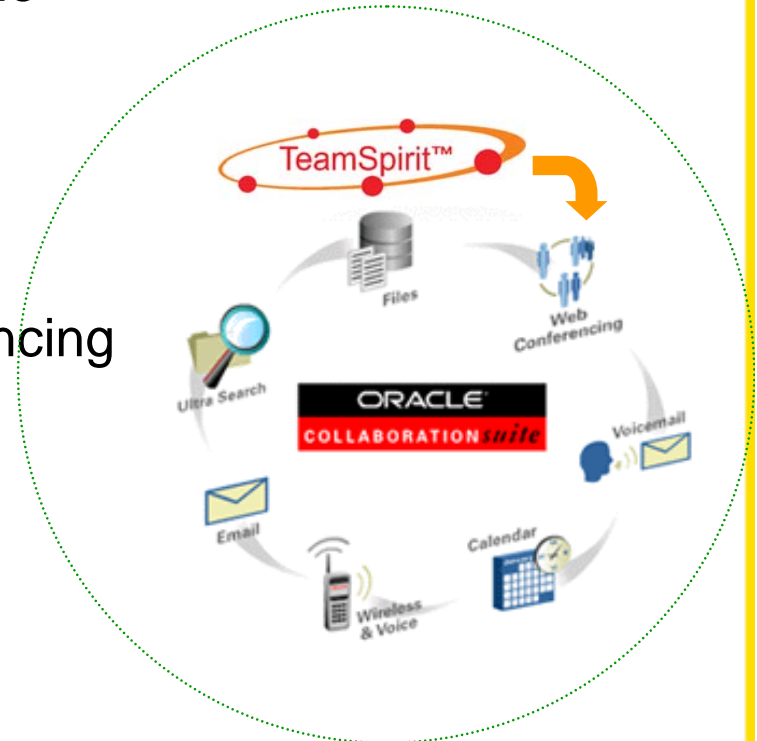
Recording

PSTN support (dial-in, dial-out)
for conferences

VoiceMail, Call forwarding, etc.

Softphone
client

Conferencing
Server



Effective Conferencing Server Is essential, as client software

**Target: 3000 VoIP users supported by one server
(2x3GHz, <2,500\$ Windows machine)**



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Voice Quality

Set of NO's (delays, echoes/noises, losses, drops)

Despite numbers, usually judged subjectively.

Target: Wide band voice becoming a must.



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Integration with Applications/Data

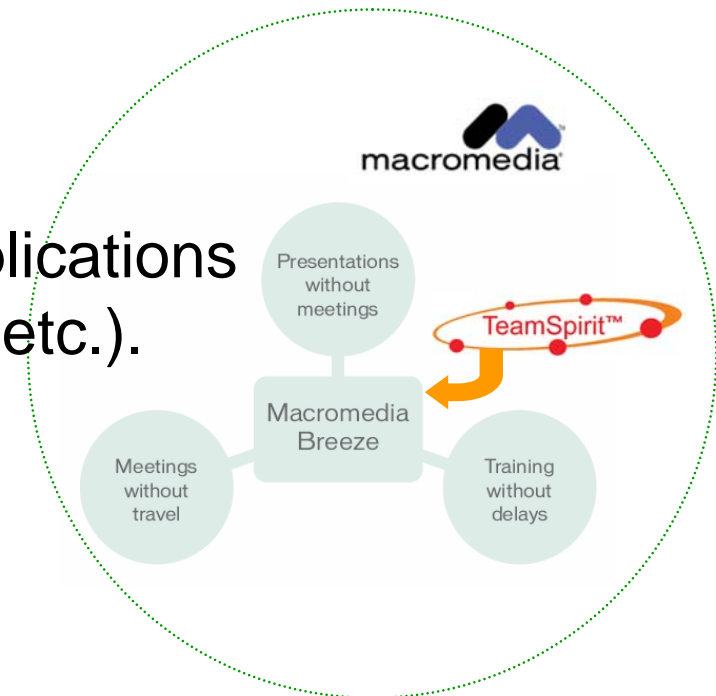
Voice is sensitive real-time data.
Skype suffers when simultaneous applications/downloads execute.

Not an excuse when documents or applications are part of a service (games, auctions, etc.).

Voice must perform well

- standalone, or with video,
- with application running (CPU load),
- with document sharing (Network load).

Target: <10% of Pentium-IV, voice should survive @100% CPU load



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Cross-platform access

Solutions available.

Target: voice to be efficient
voice+video or voice+applications
@ mass-market 300MHz devices



Desktop

Windows ✓

Mac ✓

Linux ✓

Web

browser plug-ins ✓

Java ✓

PDA

Pocket PC ✓

Symbian ✓



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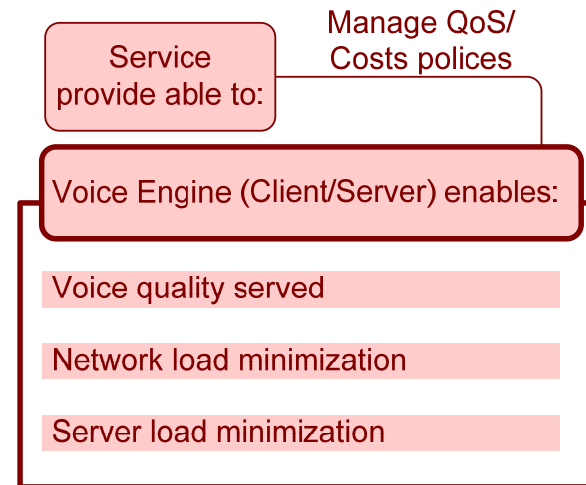
Costs Control

Monitor, understand and predict costs

Balance cost and performance in runtime seamlessly as users continue talking.

Plan and implement upgrades easily (more concurrent users, new features, connect VoIP hardware).

Target: 3000 concurrent users per PC-server, compared to few hundred ports per Hardware box, lower port price



Voice enabled on-line auction case



Users may join freely (predefined conference, not instant call)

All have to talk simultaneously (multipoint conference)

Costs (per conference) have to be low (scale)

Voice quality required (negotiations are important)

Voice + browsing, app. sharing (bidding) or document sharing (descriptions, photos)

Should be accessible from different devices

Enterprise sellers should be supported (PSTN, IP phones, etc)

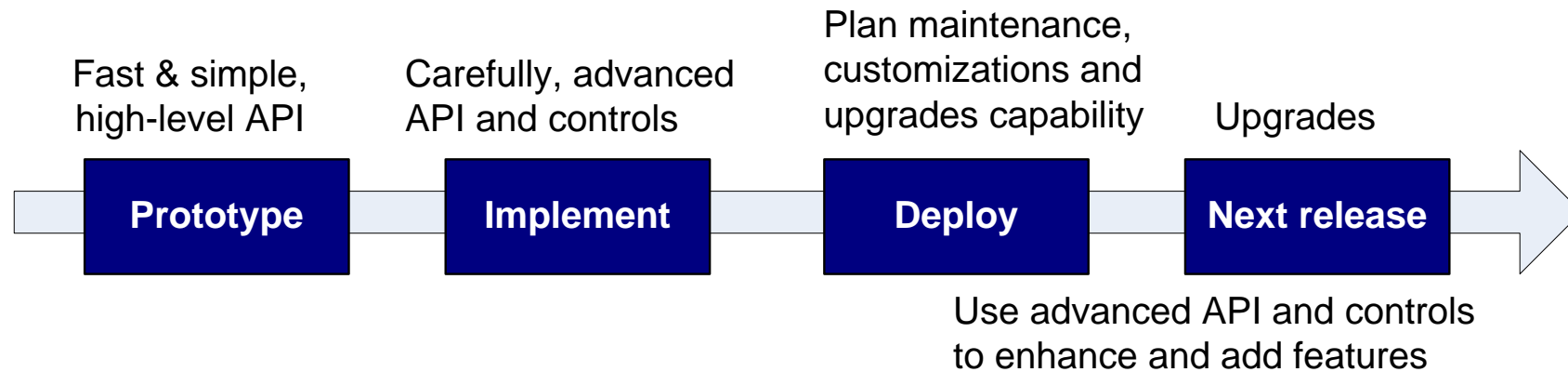


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Deployment path



Target for deployments: scalability, ability to customize/add features, and vendor support for VoIP technology.

(should be fast-start, but no “black box VoIP”)

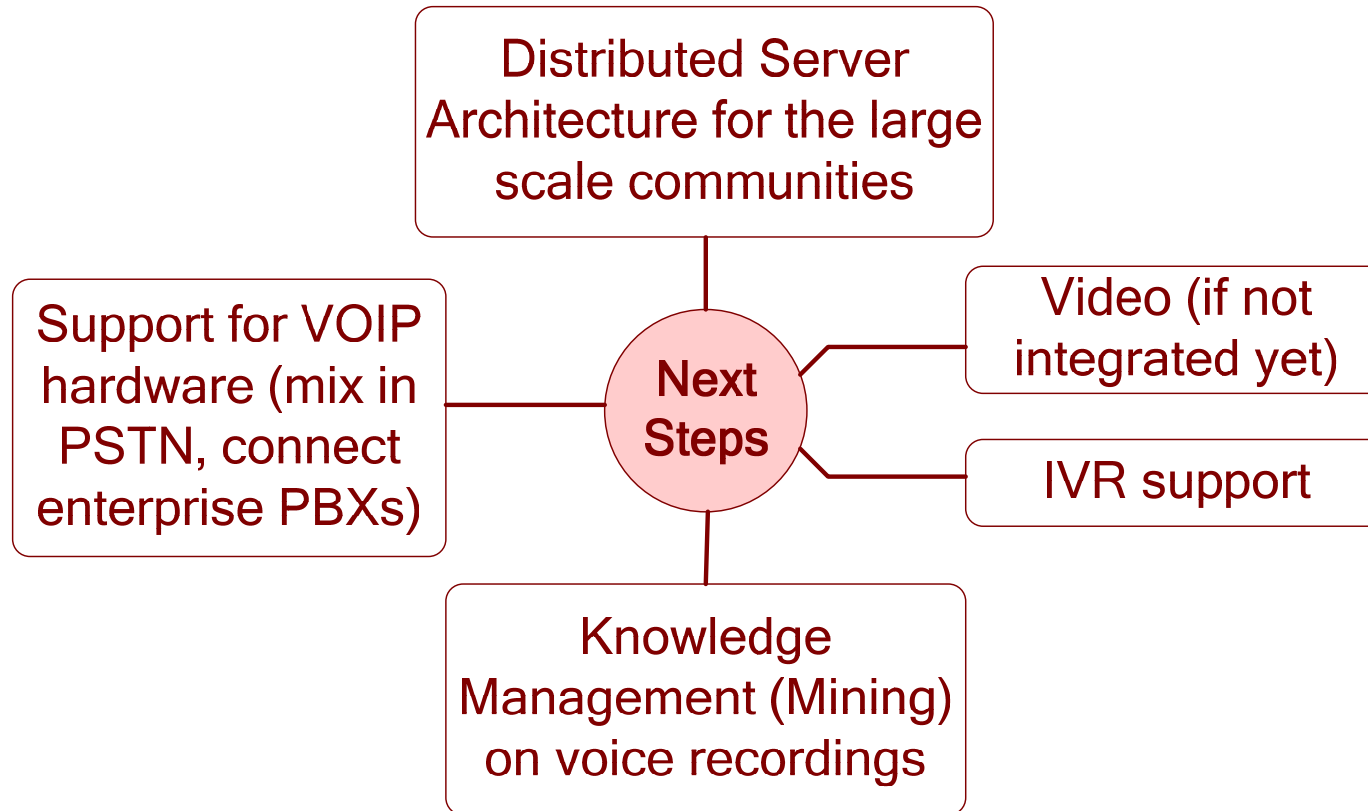


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Further development



Thank you.



Enterprise-focused multi-point voice conferencing engine



SPIRIT provides VoIP client-server engines for conferencing and collaboration

biz@spiritdsp.com
www.spiritdsp.com/voip



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