Beyond Speech
Bringing Multimedia to Customer Self-Service Interactions

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Video is Behind the Data Growth

Video Driving Rapid Growth in Mobile Internet Traffic
Mobile Data Traffic to Rise 66x by 2013E (131% CAGR)

Global Mobile Data Traffic, by Type
2008 – 2013E

- Total: 131%
- Data: 112%
- P2P: 101%
- Video: 154%
- Voice: 112%

BB Mobile Penetration Doubles in 5 Years

3G Subscribers Approach 4B

- **3G+ Subscribers (Millions)**
  - 2008: 429
  - 2009 (E): 774
  - 2010 (E): 1366
  - 2011 (E): 2189
  - 2012 (E): 3024
  - 2013 (E): 3876

- **3G+ Penetration (%)**
  - 2008: 11%
  - 2009 (E): 17%
  - 2010 (E): 27%
  - 2011 (E): 37%
  - 2012 (E): 52%
  - 2013 (E): 64%

3G Subscribers Approach 4B

3G Tipping Point in 2010

3G Video Call Center

- According to statistics from UMTS Forum, 3G users have exceeded 6.6 billion globally as of 15 April 2008. This means that 3G businesses globally have entered into the stage of accelerated development. Around the world, 3G's three major characteristics are remarkable. They are not only reflected in an increasing variety of terminals but also in rising data transfer rate. And at the same time, there has been a dramatic decline in rates. Moreover, in-depth application of 3G is bringing great value to carriers, as it also further promotes the popularity of mobile data services.

- 3G = Voice + Data + Video Call

- Video Call
  - Standard video size of formats: QCIF 176 x 144
  - Standard video formats: H.263
  - Standard audio voice format: AMR-NB
  - Any 3G mobile phones, mobile phone models are not restricted
Video Market Segments – Industry Analyst View

- Mobile Video Telephony
  - 3G handset and network compatible
  - 3G-324M enables video in 3G wireless radio access network
  - Subset of Video Telephony
    - Specific enterprise focus (IVVR, etc.)
- Contact Center
- IP Streaming
  - Internet browser managed and viewed
  - Fixed or mobile broadband networks
- Mobile TV
  - Real-time broadcast TV to the mobile handset
- IPTV
  - High definition video on demand to “set-top” box
  - Fixed broadband network enabled end-to-end IP service
Why Is that Video Channel on ALL THE TIME?

• The Market is ready for Video
  • Mobile Bandwidth Is There
  • End-User demand for video apps
  • Innovation of the application developers
  • Availability of capable handsets
IVVR: Interactive Voice/Video Response

- In the same way that IVR systems built on Dialogic® products enable companies to create self-help telephony applications and reduce contacts with their agents, IVVR will extend that paradigm, allowing companies to build self-help audio/video applications that address significantly more complex tasks.
- Delivering complex instructions to the location that they are needed.
- Enabling a simplified user interface on a mobile phone:
  - When a browser interface is too complex.
  - Much in the same way that an ATM screen interface simplifies many of the tasks that can be done from a remote PC, with a limited function interface.
IVVR vs. IVR

**IVVR**
- Voice and video menu
- Images
- Real-time data updates
- RTSP
  - Real-Time Streaming Media

**IVR**
- Voice
- Enter DTMF 0-9, *, #
IVVR vs. Data Services

IVVR
- Compatible to ALL 3G handsets
- No need to download s/w
- Simple as dial a number
- Caller ID provides unique Identity
- Bill by Call minutes

Data service
- Phone set dependent
- Pre-install or download software
- Connect to Internet
- Authentication or encryption is required
- Billing base on kbytes
IVVR Solution Overview

- Transparently link video content from diverse applications for IP and 3G subs

- Keypad or speech menu navigation

- Ability to play stored or live content
  - Stored: video clips, video greetings, etc.
  - Live: news, sports, traffic, security

- Provides improved interface to video content than mobile WEB browsers

- RTSP-controlled media servers: preferred way to store/maintain content
  - Darwin, Helix, 3G Builder, etc.
Where do I place the Jack on this Rental Car?
Simplified Browser Experience

This Website is hard to use on this small Screen
IVVR Challenges

1. Making Video menu is much more complicated. Production cost also higher

2. Voice menu can be concatenated whenever there is a change. But not for video.

3. Need training to develop Video call flow
   Losing Time-to-Market
How does Dialogic address this?

The DiaStar™ Server is being developed as an open source project called Project DiaStar™ (www.projectdiastar.org)

Dialogic® Host Media Processing Software

Powerful & flexible media engine for Value-Added Services Platforms (VAS), Service Delivery Platforms (SDP), IMS MRF
The Multi-Media Contact Center

- Handles Voice, Video and Text Customer Contacts
- Traditional Voice and Interactive Voice Response
  - Adds HD Voice
- Video Streaming, Video Upload, Interactive Video Response
- Text
  - SMS, MMS, EMail
It’s NOT about the Caller Seeing the Agent

- New Opportunities is Customer Self Service
  - Video On Hold
  - IVVR

- Video Enabled Agent
  - Allows Agent to Push Video to the caller while maintaining a voice conversation with the caller
  - This may create unique Up-Sell and Cross-Sell opportunities

- Video Enabled Caller
  - Caller can record and upload video to the agent or automated system
    - Effective recording for damage claims
    - Agent becomes a more effective shopping assistant for the caller
  - Allows Agent to see what the caller sees
    - May improve agent effectiveness in certain support/assistance situations
Agent Interaction with Video Upsell

Do I want an Ocean View or a Garden View?

Let me show you a video of an Ocean View and a Garden View Room
Wrap Up

- Video is real and happening today
- Video Enabled Telephony addresses a specific market need that other Data Services do not
- Interactive Voice/Video Response can
  - Can effectively deliver complex instruction sets exactly where and when they are needed
  - Provide a simpler user interface than may be achieved with a more traditional data solution
- Multi-Media Enabled Contact Centers
  - Are an evolution in customer self help
  - May provide unique up-sell and cross-sell opportunities
  - May improve agent effectiveness in certain support situations
- Implementing these systems with the DiaStar™ Server and Asterisk creates new revenue opportunities for creative developers
Dialogic, Dialogic Pro, Brooktrout, Diva, Diva ISDN, Making Innovation Thrive, Video is the New Voice, Diastar, Cantata, TruFax, SwitchKit, SnowShore, Eicon, Eicon Networks, NMS Communications, NMS (stylized), Eiconcard, SIPcontrol, TrustedVideo, Exnet, EXS, Connecting to Growth, Fusion, Vision, PacketMedia, NaturalAccess, NaturalCallControl, NaturalConference, NaturalFax and Shiva, among others as well as related logos, are either registered trademarks or trademarks of Dialogic Corporation or its subsidiaries (“Dialogic”). The names of actual companies and products mentioned herein are the trademarks of their respective owners. Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement their concepts or applications, which licenses may vary from country to country. Dialogic may make changes to specifications, product descriptions, and plans at any time, without notice.

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USE CASE(S)
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DiaStar™ Server

- Call Progress Analysis (CPA) Enhancements - User-Defined Tone Detection with detection results available in both Asterisk Dialplan and the Asterisk Manager Interface (AMI)

- Robust support of SIP Video from the Asterisk Dialplan, including:
  - Play and Record Audio and Video
  - H.263 Support
  - MPEG4 Support

- Video Transcoding between H.263 and MPEG-4

- Video Transrating

- Video scaling to enable playback of video on different sized video screens

- SIGTRAN signaling support

- Native media bridging
The DiaStar™ Server Release History

- Release 1.0 Launched September 2009
  - Client/Server Architecture
  - Call Progress Analysis (CPA) Answering Machine Detection (AMD) and Positive Voice Detection (PVD)

- Release 2.0 Launched March 2010
  - SIP Interface
  - SIGTRAN
  - User Defined Tone Detection
  - Advance Video Support
    - Play/Record
    - Transcoding between H.263 and MPEG-4
    - Scaling to enable playback of video on different sized video screens
    - Native media bridging

- Release 2.1 Scheduled for Launch May 2010
  - Video Conferencing
  - Dialogic® DSI Components Support
More on DiaStar Server™ Tomorrow

Antony Martin
Director of Open Source Engineering - Dialogic Corporation
Wednesday 10 March 13:50 PM - 14:20 PM

This demo will focus on converting an unwieldy, poorly implemented Interactive Voice Response system and into an easy to use, Interactive Voice and Video Response (IVVR) system that overcomes the inherent limitations of the IVR system. This will all be done by just changing a few Dial Plan Commands to their DiaStar equivalents.

See us in Booth 204 for more information.