

AVAYA

Self Service Speech and Consumer Video Telephony

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IP Telephony

Contact Centers

Mobility

Services



Expanding the Reach of the Multimedia Contact Center

- Observations:
 - Video calling is offered today by many 3G wireless operators
 - Coming to the U.S. in 2007 on AT&T / Cingular*
 - Video “hardphones” are being sold for use with DSL, ADSL, and cable/broadband connections—even 56 Kbit modems!
 - Video “softphone” capabilities are available for PC’s with broadband internet connectivity

* “Cingular Makes First Wireless Video Share Call”, Cingular Wireless (Press Release, January 5th, 2007)

Live Video is Available on 3G Phones Today



- Services Offered Include:
 - See You / See Me (“CUCme”) Video
 - Video Conferencing
 - Downloadable Video Content
 - Video Mail



Video Phones



Télécharger Livecom

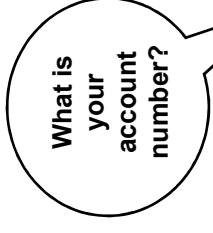
Téléphonie, Visiophonie et Messagerie Instantanée.
Abonnés Wanadoo ou pas, invitez vos proches à vous rejoindre.

Téléchargez vite Livecom
pour TELEPHONER GRATUITEMENT de pc à pc⁽¹⁾

« Télécharger Livecom gratuitement »

Using Consumer Video for Business

- When you call a friend—
 - You can hear each other
 - With video, you see each other
- When you call an Enterprise contact center—
 - You hear IVR with keypad or speech recognition input
 - But, what would you see?
- Our thinking:
 - Multimedia for more effective self-service systems
 - Less opting out
 - Accomplish more business while in system
 - Multimedia overlay for more effective agents
 - Shorter call holding times, more upselling, higher customer sat



“C-Jet Airline” (recorded) Demo

- Scenario:
 - User calls “C-Jet”, an airline
 - Listens and sees a menu of choices
 - Chooses to get flight arrival information
 - Uses speech to select specific flight
- (1:27 Minutes:Seconds)





One-Way Video: The Business Value of Improved Interaction

- Visual branding
- Visual guidance for voice IVR
 - See choices
 - Confirm selections
- Show results

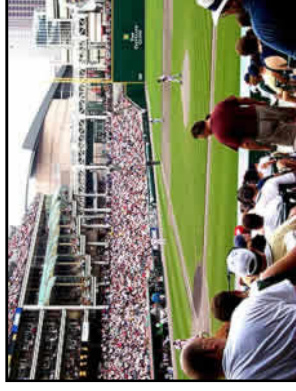
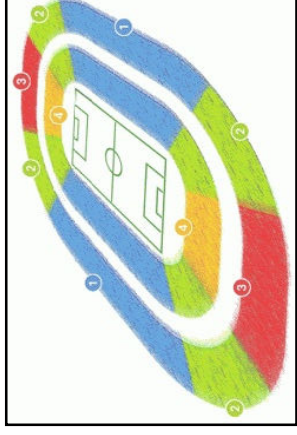


One-Way Video: Applications *NOT* possible with Voice Alone

- Show Multiple Choices Quickly
 - Schedule choices
 - Price choices
- Show Complex Choices
 - Seat locations
 - Maps showing locations
- Show Possible Experience / View
 - From a stadium seat
 - See hotel room
 - View of street when giving directions

-TicketMan –
July Schedule

10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



Comparing “Voice” vs. “Voice + Visual”

- **Study*:**
 - Users placed two test calls to a self-service system:
 - 1) Using voice alone, 2) Using voice with a real-time text display.
 - Users answered questionnaire after test calls to grade system on 1-to-5 scale.

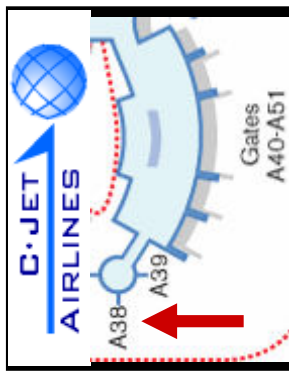
QUESTION TO USER

	Voice Alone	Voice + Text
● I was able to complete the required task	4.55	5.0
● I found the system intuitive and easy to use	4.2	4.6
● The system recovered gracefully from errors	3.9	4.7
● The system understood what I said	3.9	4.2
● Given a choice of using this system or waiting five minutes for a human operator, I would choose this system	3.75	4.7

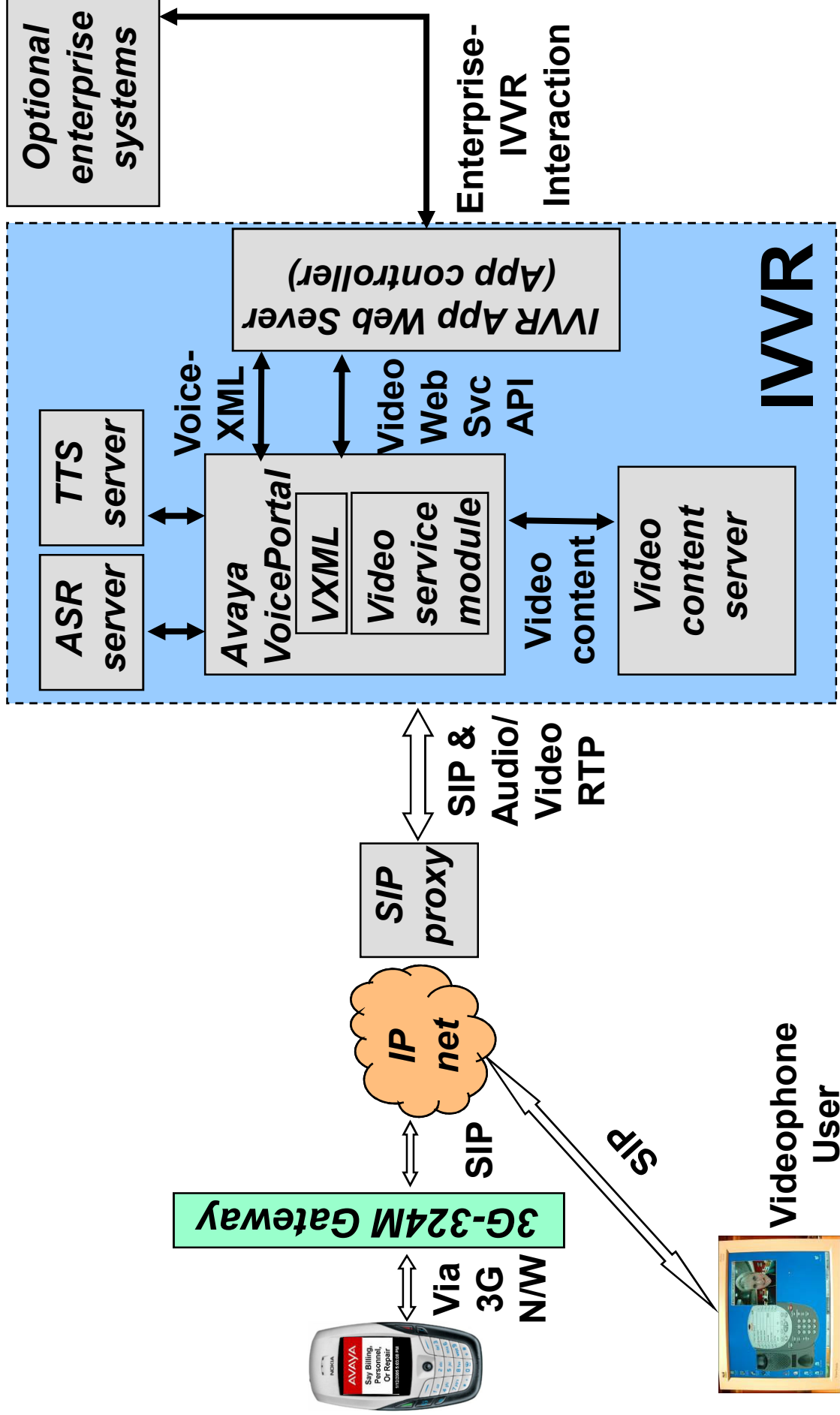
* *Constraining User Response via Multimodal Dialog Interface*, Baker, McKenzie, Biermann, Weibelhuth, International Journal of Speech Technology, p 221-228, © 2004

Calling Customers Using Video

- Information calls:
 - More immediate than simple SMS/Texting
 - Live call gives option to talk to a live agent
 - Live call (and possible interaction / acknowledgement) gives business immediate confirmation that information was received.
- Telemarketing calls
 - Inform customer of new business opportunities, sales, etc.
 - Possibly more engaging than voice-only call— improve percentage of calls actually heard by target consumer
 - Queue to live agent if consumer indicates interest



Interactive Voice & Video Response - SIP





Extending IVR Application Development to IVVR

- Take an established IVR application design tool...
 - Avaya DialogDesigner™ is Avaya's next generation tool for defining interactive voice response applications
 - Based on open source Eclipse movement with roots at IBM
 - Fundamental of Eclipse is open extensibility
 - Part of the Avaya VoicePortal™ product suite
- ... and extend to become an IVVR tool.
 - Add ability for “text to graphics”
 - Add ability to display fixed images, video clips, A/V clips
 - Provide for video barge-in control

Application Development Environment

The screenshot displays the Avaya Speech Development Environment (SDE) within the Eclipse Platform. The main window is titled "Speech - SayColorResult.prompt [english] - Eclipse Platform".

Package Explorer: Shows the project structure for "NewRGB", including folders for "JRE System Library [J2re1.4.1_...]", "TOMCAT_HOME/common/lib/se...", "WEB-INF/src", "scert-03.00.13.08.jar", "WEB-INF", "connectivity", "data", "english", "grammars", "phrases", "prompts", "flow", "main.flow", "project.variables", "french", "icons", "italian", "grammars", "phrases", and "prompts".

Main Flow Diagram: The central workspace shows a flow diagram for "SayColorResult.prompt [english]". The flow starts with a "SayColorResult.prompt (ffffff)" action, followed by a "Condition" block. The condition is an "If (InputColor:value Equal red)" block. Inside this condition, there are three parallel paths:

- A "TTS (Welcome to the red page.)" action followed by a "VideoColor(ff0000)" action.
- A "TTS (Welcome to the green page.)" action followed by a "VideoColor(00ff00)" action.
- A "TTS (Welcome to the blue page.)" action followed by a "VideoColor(0000ff)" action.

 The flow then continues through "VideoImage(C:\djs\STP\Video\TestData\cards\116.png)" and "VideoText (InputColor:value)" actions.

Properties View: The right-hand side shows the "Avaya Properties" view for the selected "SayColorResult.prompt" object. It includes a "Property" tab with the following details:

Property	Value
name	french
path	/NewRGB/french
editable	true
derived	False
last modified	11/1/05 12:37 PM
linked	False
location	C:\djs\teclipse\untime-workbench-workspace\N...

Below the properties view, there are sections for "Available Projects" (listing BlackJack and NewRGB), "Calling" (3035551212), "Called" (3035558989), and buttons for "Start Call", "End Call", "Input", "Log", and "Script".

Moving Beyond Self-Service— Customer-Agent Calls With 1-Way Video Overlay

- Issues with see you/see me video
 - Call centers not built to be seen
 - Customers don't want agents to see them
 - Low business value from just seeing agent talk on a screen
- Instead, we propose video driven by a business application: “Watch this while I talk to you”
 - System-selected video content based on transaction in progress
 - System-generated (e.g. credit balance)
 - Agent-selected video content—
“Let me show you on how to replace your printer cartridge”
 - In addition to a live video feed of agent...

Hello, this is help desk agent Val Matula. How may I help you today?



Val
Matula

AVAYA



Location Based Services

● (show video)



Moving Business Using Video

- Video+voice for more effective self-service systems
 - Less opting out
 - Accomplish more business while in system
- Video overlay and agent voice for more effective agents
 - Shorter call holding times
 - More upselling,
 - Higher customer satisfaction
- Location-based services now have yet another medium to use while serving and selling to mobile users