

Spring VON

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AT&T's Emerging Services: Services Over IP

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AT&T Fellow



The world's networking company SM

Outline

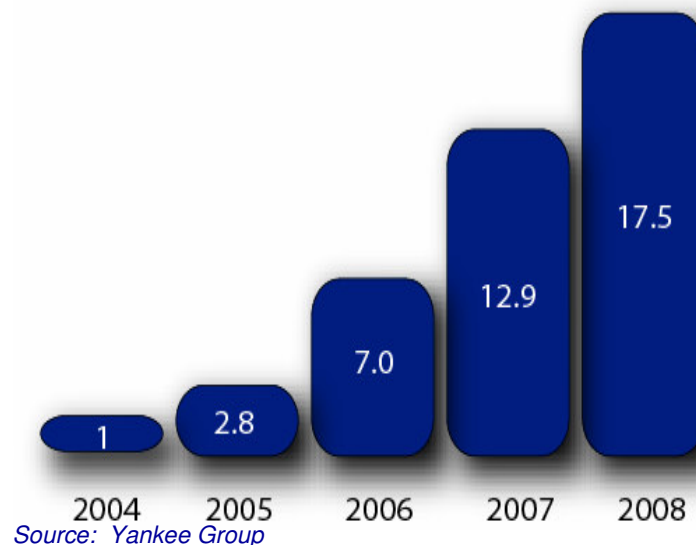
1. Services Over IP & Communication Direction

2. Example of Future Services

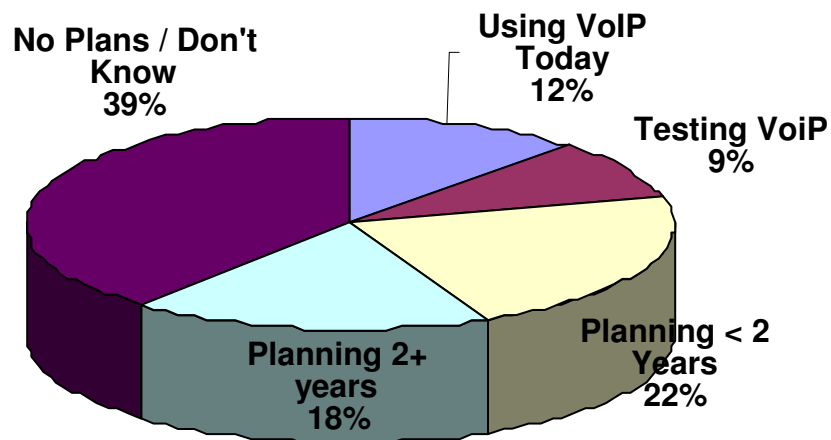
During the Past Year

Millions of VoIP US HHs...

The Buzz is Louder



...Impacting Business Adoption



The Landscape Is Changing

Source: Economist Intelligence Unit

IP Has Eaten Everything

AT&T Services Over IP Vision – Layered Architecture

Integrated Feature Execution Environment

Collaboration



Voice



Conferencing



Messaging



Video



AT&T CallVantage



IP Centrex



AT&T Services over IP Infrastructure Provides Advanced Services in a Uniform Environment

Common Services over IP Network Infrastructure

E911

Peering

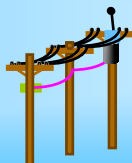
Common Call Control

Network Functions

CALEA

Border Elements & Gateways

All Access Technologies



Any End Device

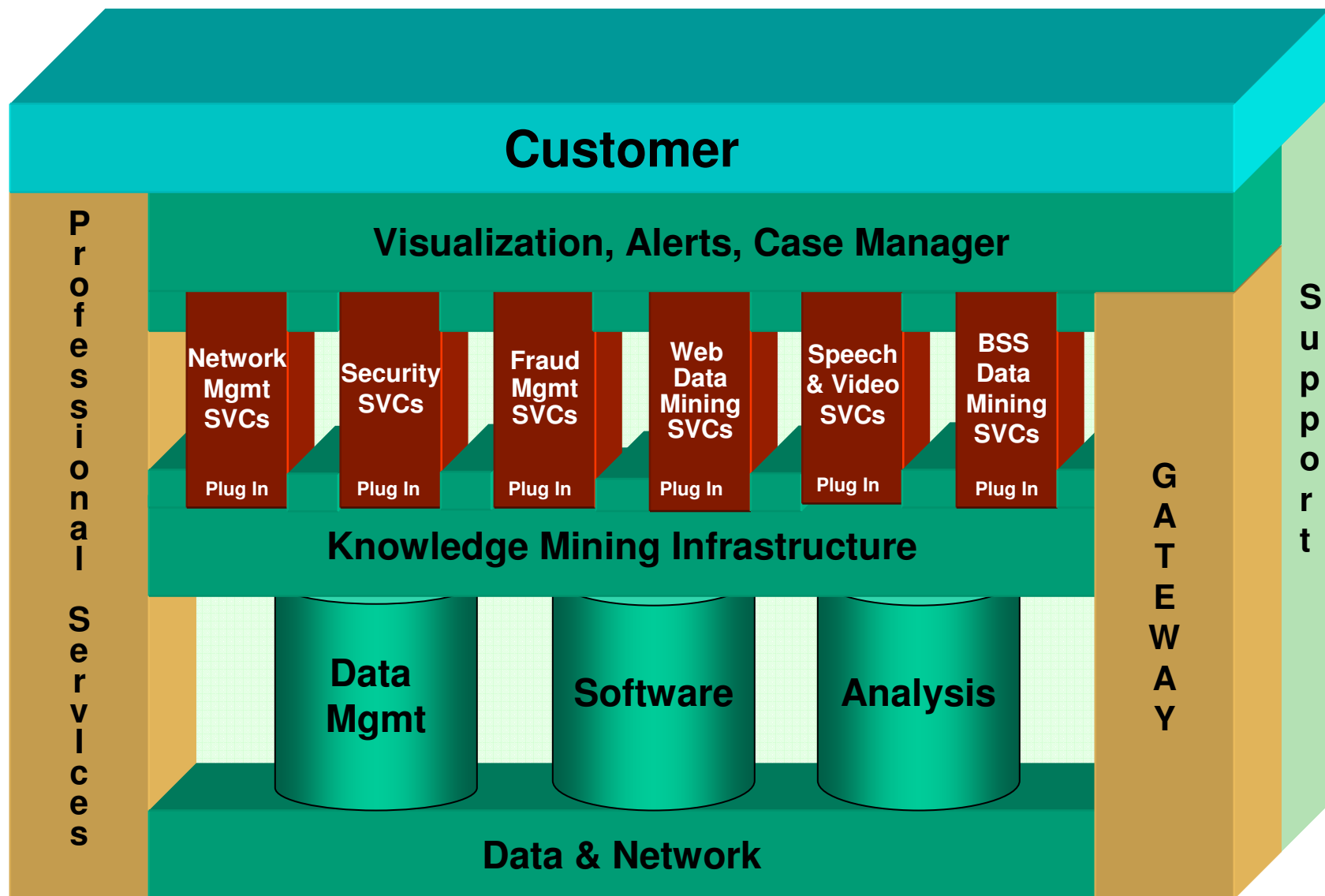


Outline

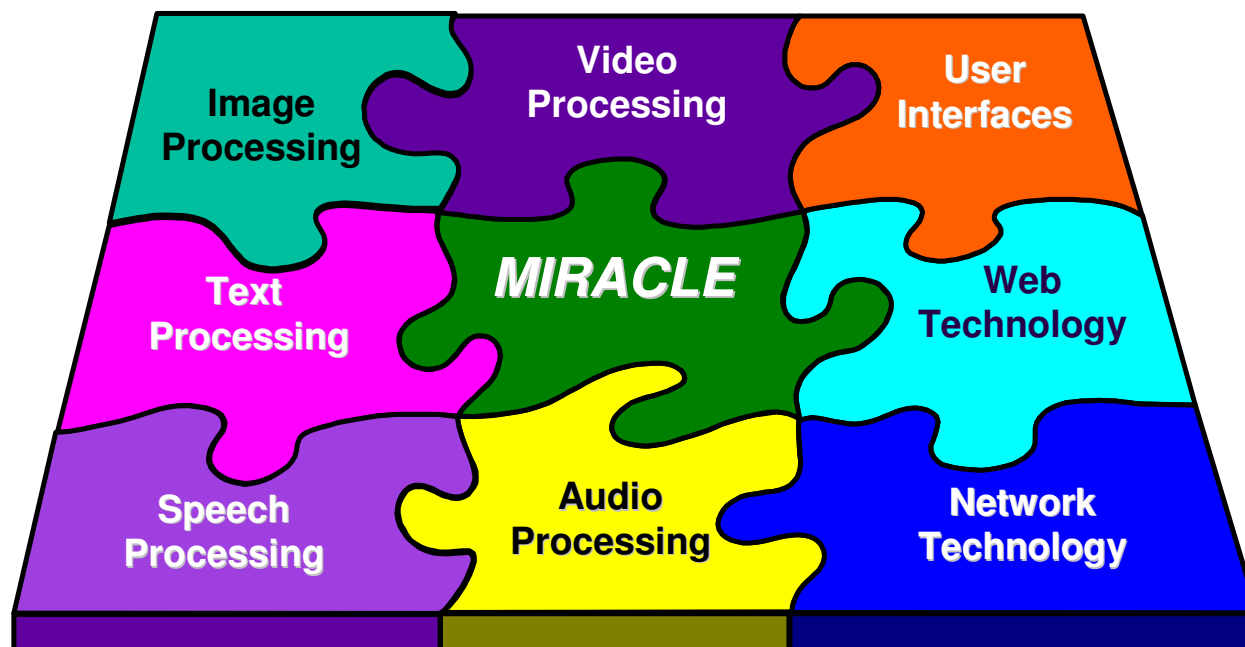
1. Services Over IP & Communication Direction

2. Example of Future Services

Services Over IP Framework



Services Over IP



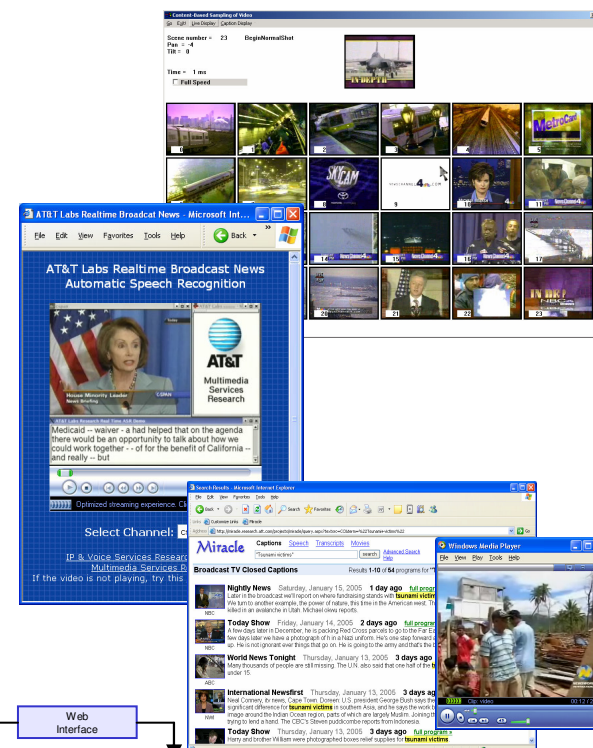
MIRACLE – A platform aimed at creating the technologies for automated and content-based indexing of multimedia information for intelligent, selective, and efficient retrieval and browsing using IP technology

MIRACLE: Multimedia **I**nformation **R**etrieval by **C**ontent
- Bringing all the technologies together

Where We Are Going – Technologies and Services

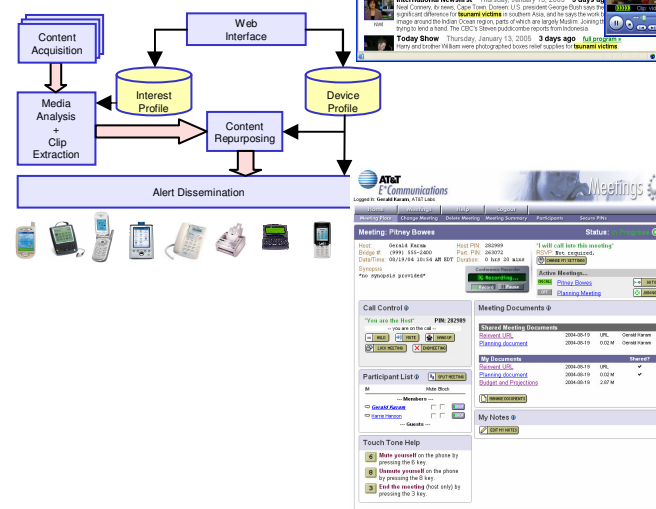
■ Enabling Technologies

- Video Indexing
 - Generates a pictorial index for visual browsing
 - Generates a compact representation
- Speech / Audio Processing
 - Enables searching of spoken communications
 - Speaker segmentation improves browsing
- Video Search
 - Content-based and metadata-based indexing
 - Information Retrieval

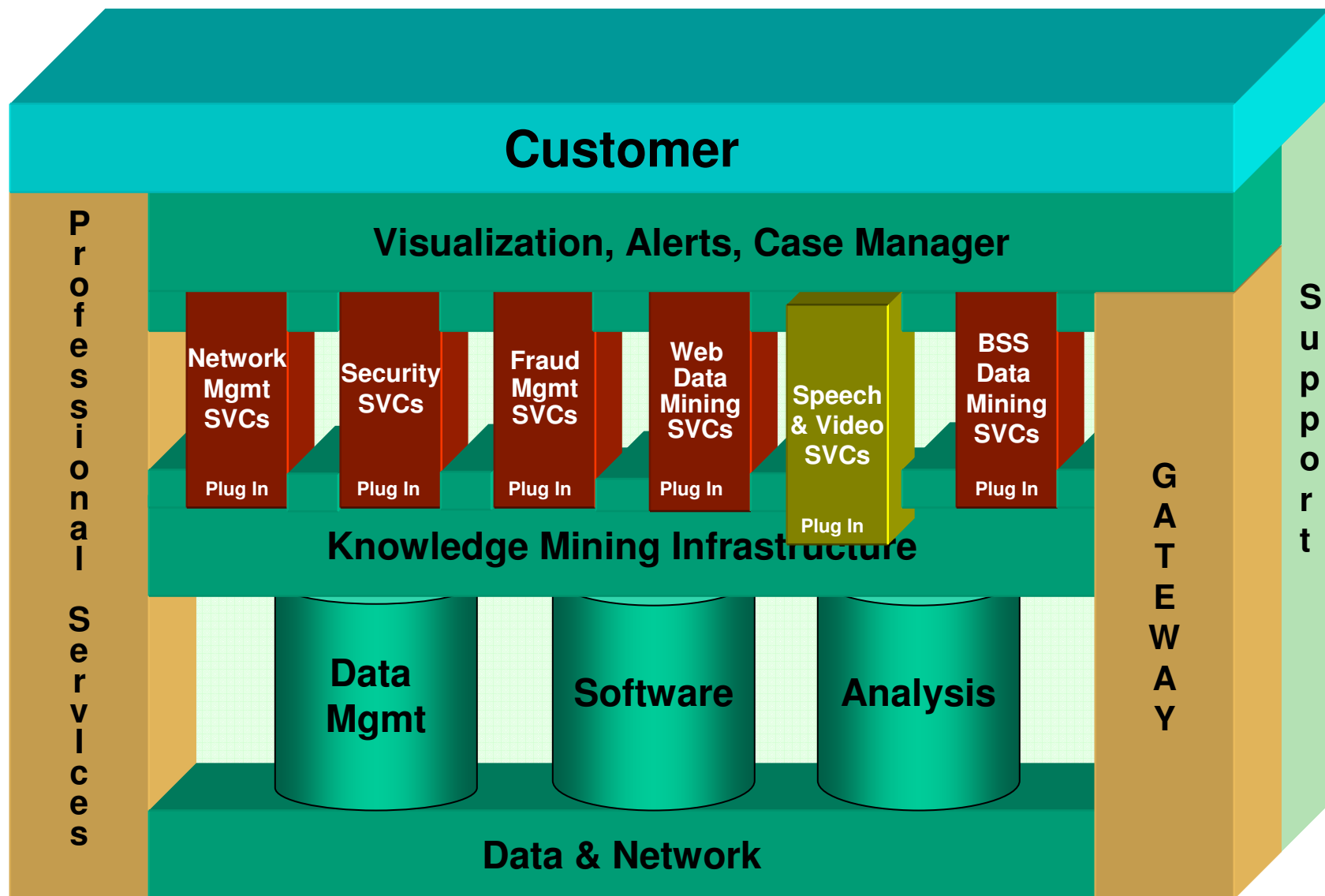


■ New Service Concepts

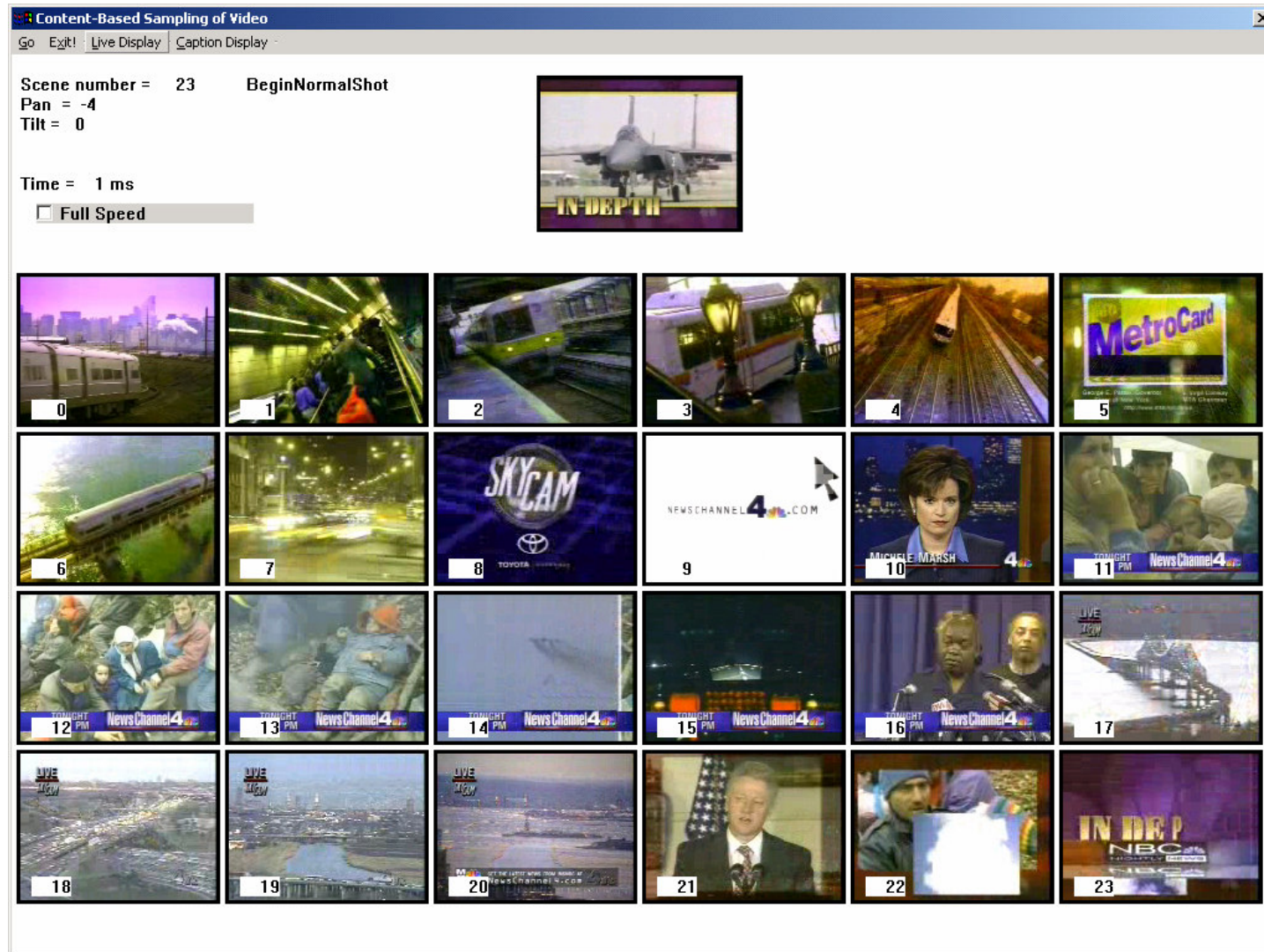
- Miracle: IP Video Search Engine
- MediaAlert: Content Monitoring and Alerting
- Enhanced VoIP Conferencing



Services Over IP Framework



Video Indexing: Content-Based Sampling



Technologies: Real-Time Automatic Speech Recognition



- Enables automatic indexing of spoken communications
- Features:
 - Large Vocabulary (210,000 words)
 - Real-Time Response
 - Low Latency
 - High Word Accuracy

Miracle Video Search Engine

The screenshot displays the Miracle Video Search Engine interface within a Microsoft Internet Explorer browser window. The address bar shows the URL: <http://miracle.research.att.com/projects/miracle/query.aspx?textsrc=CC&term=%22Tsunami+victims%22>. The search results are for "Tsunami victims" and show 1-10 of 54 programs.

Broadcast TV Closed Captions Results 1-10 of 54 programs for "Tsunami victims"

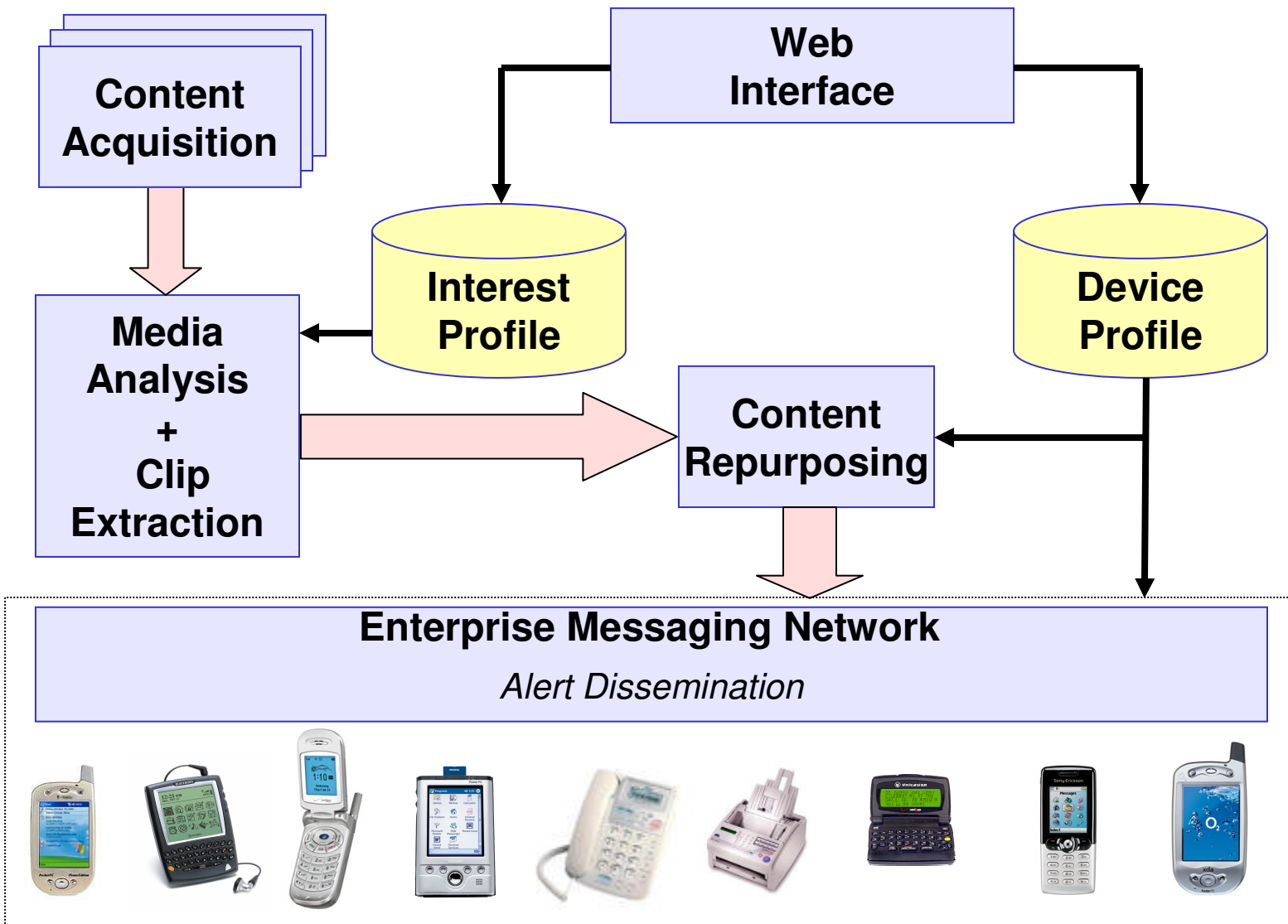
- Nightly News** Saturday, January 15, 2005 1 day ago full program »
Later in the broadcast we'll report on where fundraising stands with **tsunami victims**. We turn to another example, the power of nature, this time in the American west. The searchers killed in an avalanche in Utah. Michael okwu reports.
- Today Show** Friday, January 14, 2005 2 days ago full program »
A few days later in December, he is packing Red Cross parcels to go to the Far East. A few days later we have a photograph of h in a Nazi uniform. He's one step forward and up. He is not ignorant ever things that go on. He is going to the army and that's the best.
- World News Tonight** Thursday, January 13, 2005 3 days ago full program »
Many thousands of people are still missing. The U.N. also said that one half of the **tsunami** victims are under 15.
- International Newsfirst** Thursday, January 13, 2005 3 days ago full program »
Neal Connery, itv news, Cape Town. Doreen: U.S. president George Bush says the **tsunami** victims in southern Asia, and he says the work being done around the Indian Ocean region, parts of which are largely Muslim. Joining the searchers trying to lend a hand. The CBC's Steven puddicombe reports from Indonesia.
- Today Show** Thursday, January 13, 2005 3 days ago full program »
Harry and brother William were photographed boxes relief supplies for **tsunami victims**.

Overlaid on the right is a Windows Media Player window showing a video clip. The video shows a group of people, including children, standing in front of a damaged building. The player controls show the video is at 00:12 / 21:17.

Miracle Video Search Engine



MediaAlert IP Services



Enhanced Conferencing

AT&T E*Communications Meetings

Logged In: Gerald Karam, AT&T Labs

Home Meetings Help Logout

Meeting Place Change Meeting Delete Meeting Meeting Summary Participants Secure PINs

Meeting: Pitney Bowes Status: In Progress

Host: Gerald Karam Host PIN: 282989
Bridge #: (999) 555-2400 Part. PIN: 263072
Date/Time: 08/19/04 10:54 AM EDT Duration: 0 hrs 20 mins

Synopsis
no synopsis provided

Conference Recorder
Recording...
Record Pause

Active Meetings...
ONCALL Pitney Bowes
Planning Meeting

Call Control
You are the Host PIN: 282989
-- you are on the call --
HOLD MUTE HANG UP
LOCK MEETING END MEETING

Participant List
IM Mute Block
--- Members ---
Gerald Karam
Karrie Hanson
--- Guests ---

Touch Tone Help
6 Mute yourself on the phone by pressing the 6 key.
8 Unmute yourself on the phone by pressing the 8 key.
3 End the meeting (host only) by pressing the 3 key.

Meeting Documents
Shared Meeting Documents
Reinvent URL 2004-08-19 URL Gerald Karam
Planning document 2004-08-19 0.02 M Gerald Karam
My Documents
Reinvent URL 2004-08-19 URL
Planning document 2004-08-19 0.02 M
Budget and Projections 2004-08-19 2.87 M

My Notes
EDIT MY NOTES

Recorded Conference Search and Playback - Microsoft Internet Explorer provided by ...

Recorded Conference Search and Playback
Meeting: Application Building
Search for a term in this conference recording: protocol
... or click on one from this list: registry, implementation, external architecture, protocol, application, budget, description, dynamic
... or click on the play button to listen to the entire conference.

0 39:26 1:00:29 hour:min:sec
Play Stop Speed

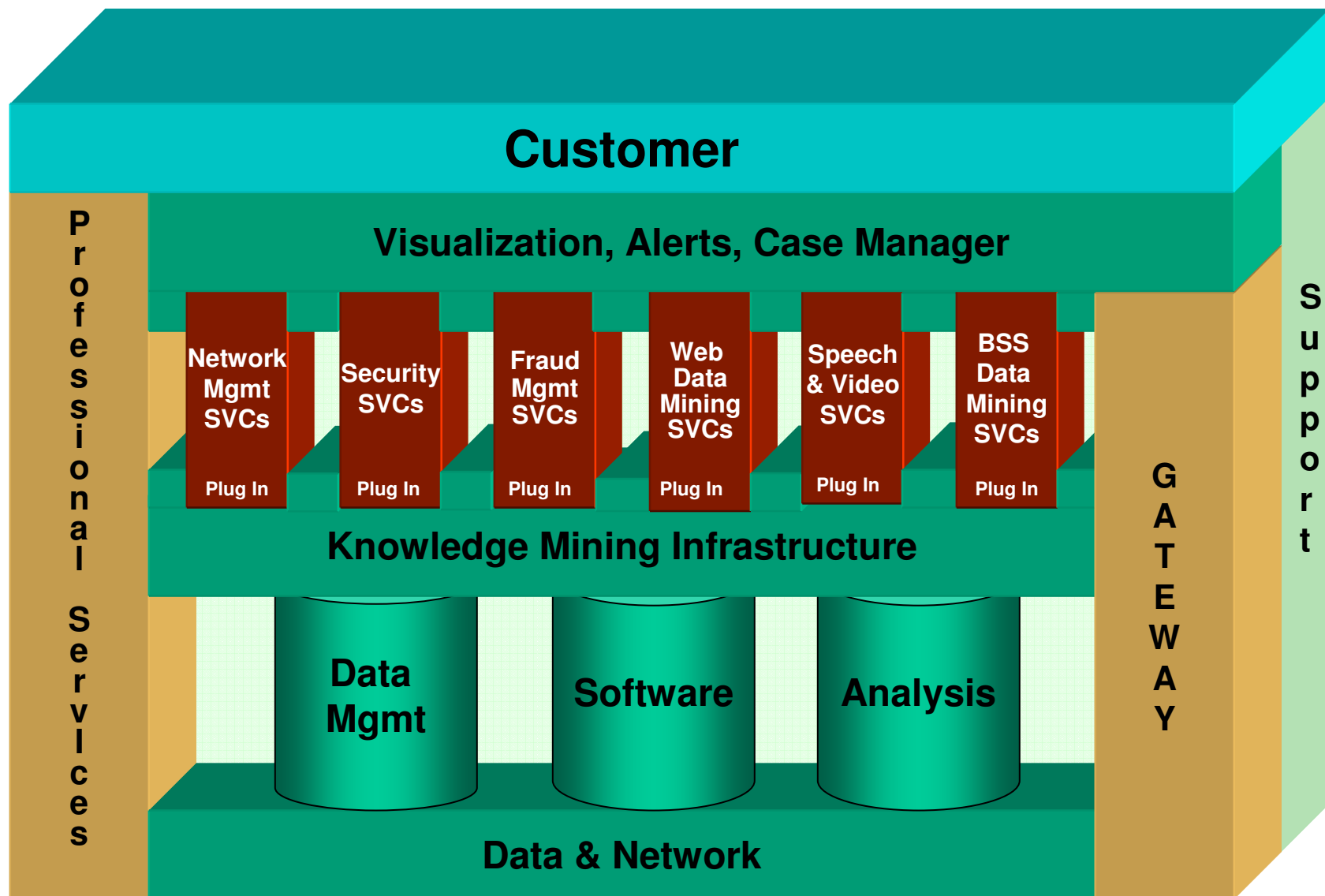
Selected Term: protocol (3 hits)
1) 00:31:10 actually run across any network protocol oh we feel that most
2) 00:37:22 running all of the access protocol is usually almost always going
3) 00:47:19 as the at the uh protocol us is a higher level

■ VOIP conferencing is AT&T's new enabler for powerful new conferencing features

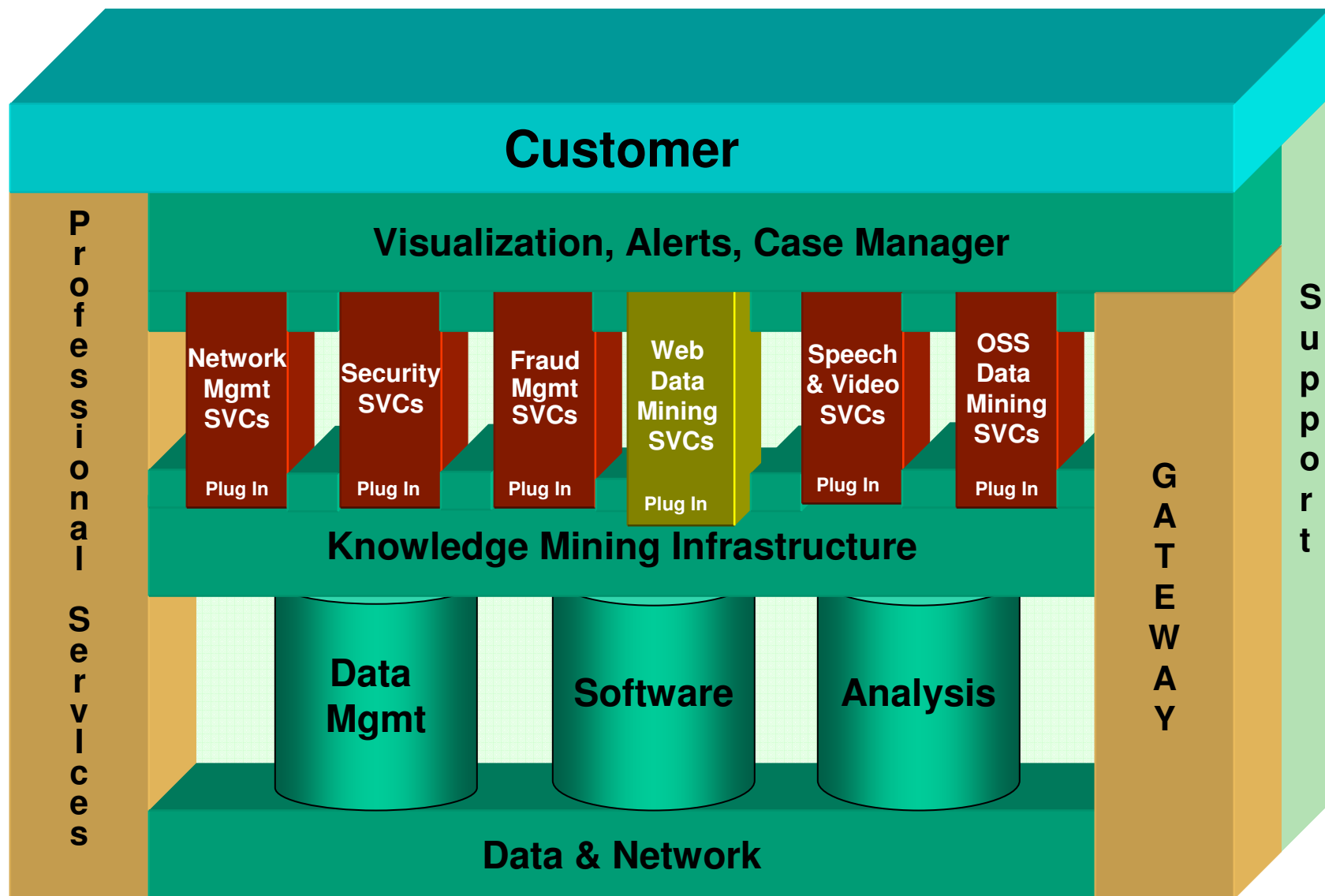
- Meeting recording
- Multi-meeting support
- SpeechLogger keyword search
- Email/IM notification
- Meeting Security

SpeechLogger™ is used to manage conference recording and searching

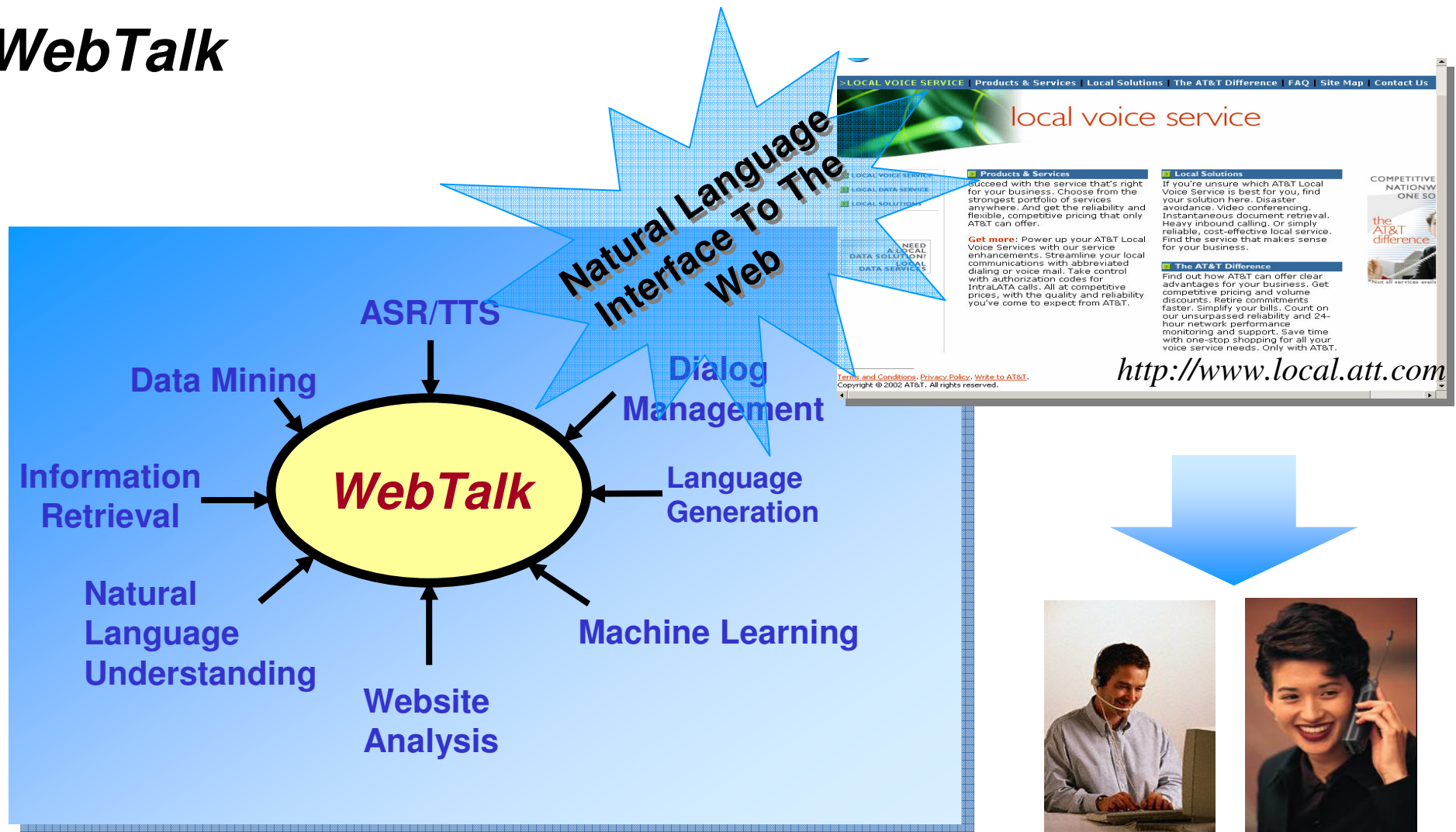
Services over IP Framework



Services Over IP Framework



WebTalk



**Automatic spoken dialog
system building based on a set
of Web pages**

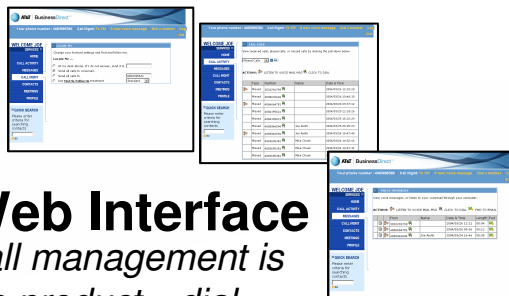
WebTalk

Unlocking Customer Value

Dial Tone
Unlimited local and LD



Web Interface
*Call management is
the product...dial
tone is a feature.*



Customer CPE *Any device...
any connection*



Value Creation

Cost
Do More for Less

Control
Self-Service

Convenience
Real-Time Your Way

**Leveraging AT&T Labs Innovation, AT&T Will Continue to
Provide New Services, Unlocking Value for Our Customers**

Thank You!



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