



Welcome



the Future of e-Collaboration

intelligent, autonomous and massively distributed

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October 10, 2006

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- Why another real time collaboration system?
- The EVO concept
- Let see EVO in details



Why another Collaboration System?

October 10, 2006

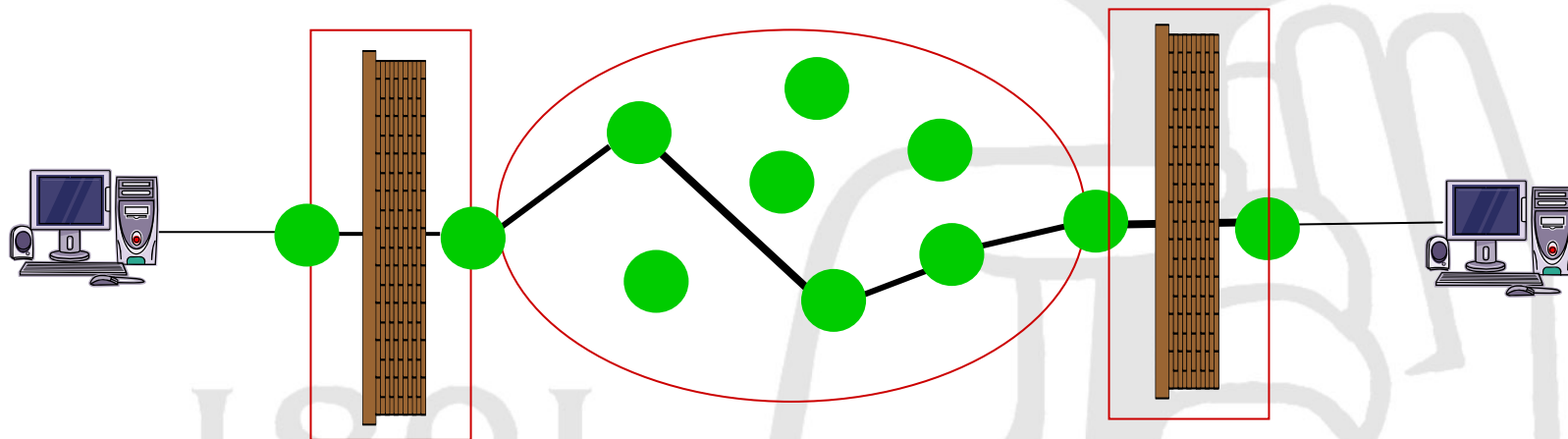
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Why?

Why it is so difficult to achieve total reliability/robustness when deploying a RTC Infrastructure?

- The Real-Time Collaborative environment is a living environment: constantly changing, evolving
- In addition, devices/domains/nodes are managed by several independent technical and administrative entities.



Solution ?

Solutions ?



By creating a "living" RTC Infrastructure capable to **react/adapt** to the change of the environment in **real-time transparently** to the **end-user**.

Living Infrastructure

Required Steps to create such infrastructure:

1. Monitor the environment
2. Detect any change
3. Put intelligence into all components to react to the detected changes
4. Spread the charge and intelligence on the network
5. Remove all single point of failure



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EVO Concept

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EVO Zoo

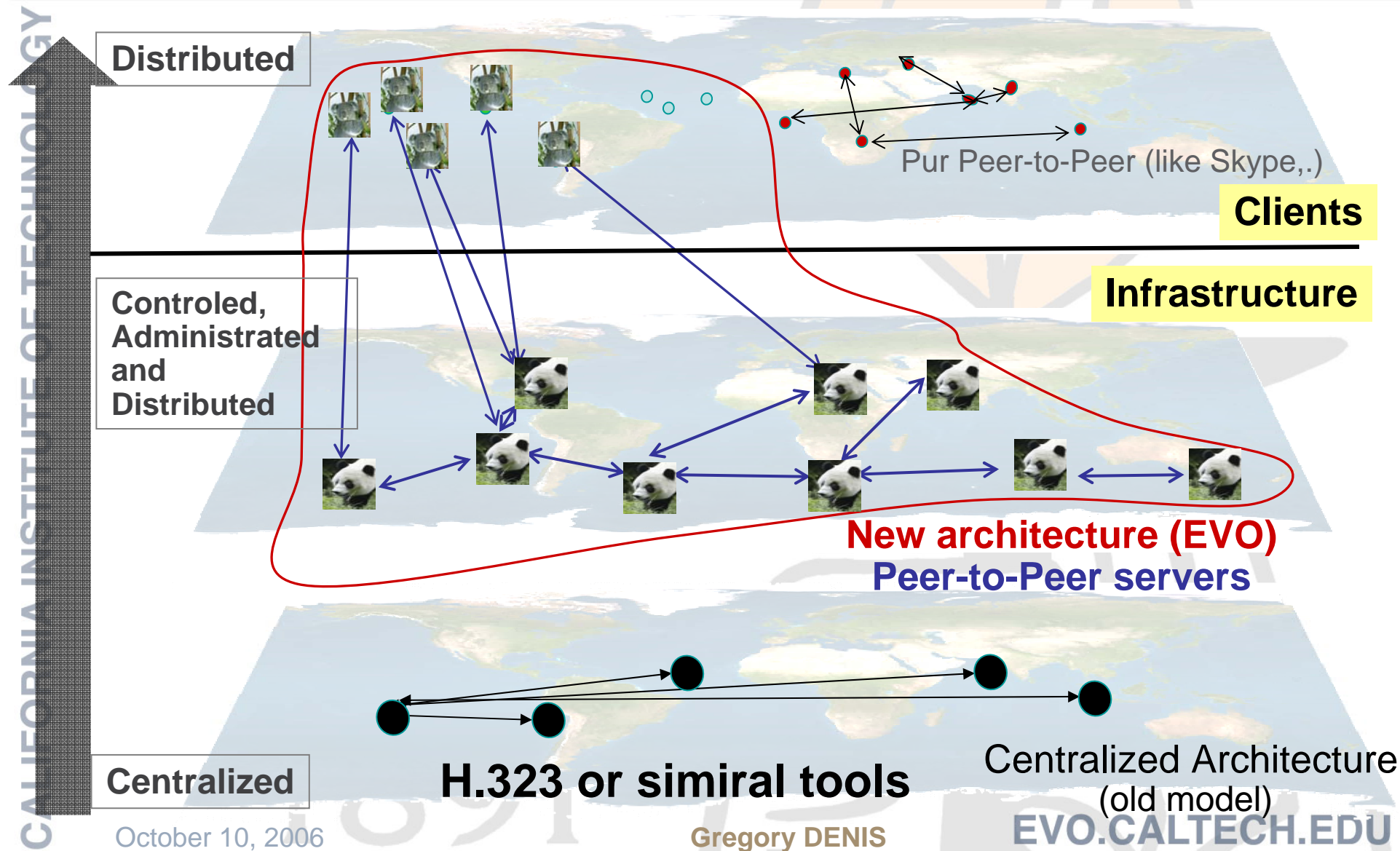
Our components are **animals**.



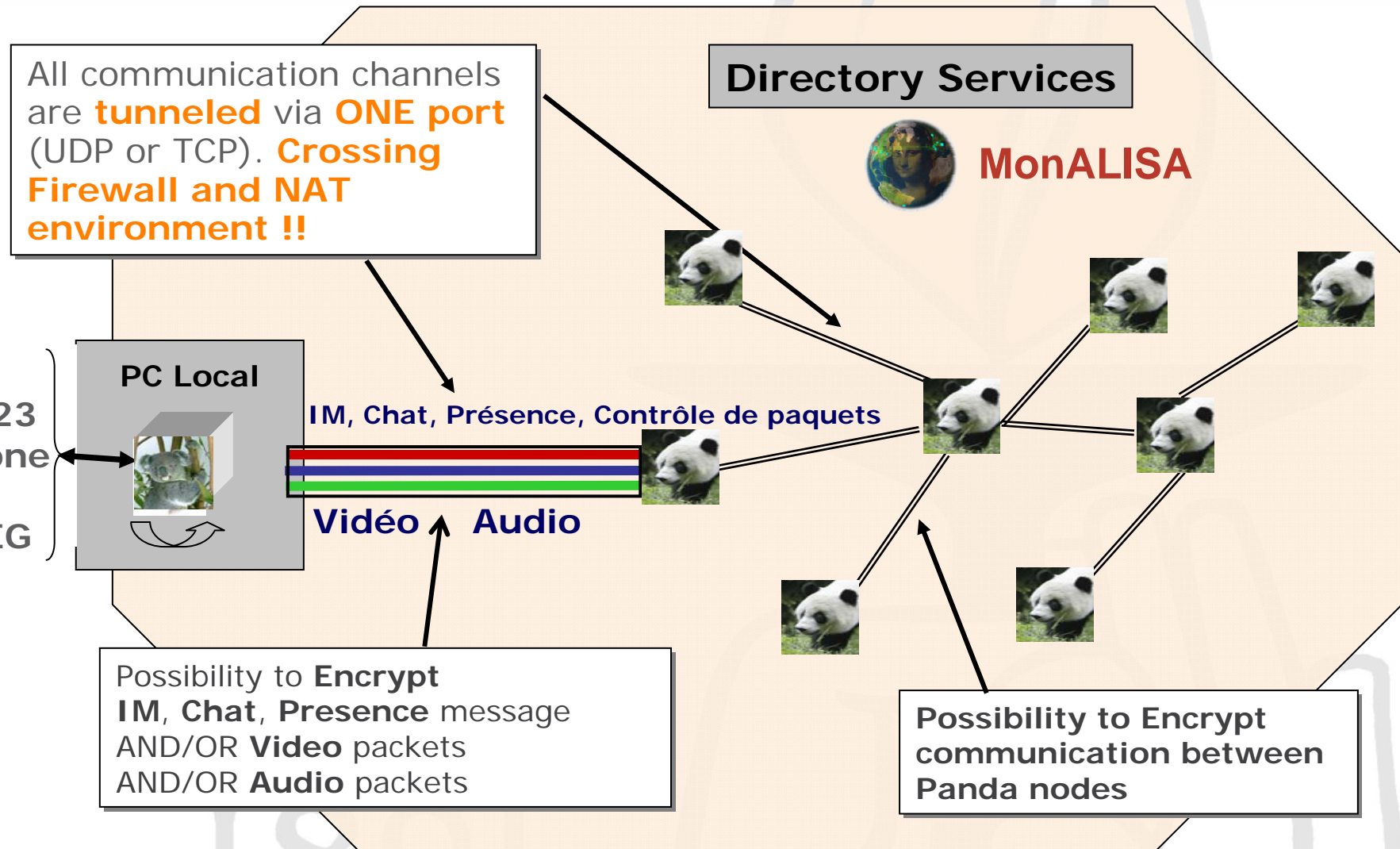
Why? Because they have their **own intelligence and are autonomous**.

- **Kangaroo**: Jump to any available data base servers (redundant).
- **Panda**: Hidden from the end-user, he distributes & inter-connects the other components.
- **Koala**: Hangs the user and follow him in all cases.
Live in the local machine.

EVO Advanced Architecture



Autonomous Infrastructure





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EVO in details

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Panda: one EVO server



Some functionalities:

- **Dynamic registration** to high level directory services to provide global infrastructure view.
- **Automatic re-activation** of components and services.
- **Automatic** and secure **code update**.
- **Continuous monitoring** of network quality (packet loss, jitter, latency) between its peers and its possible peers.

Panda

Some functionalities (part 2):

- **Automatic rerouting** to obtain the best performance/quality.
- **Encryption** between central nodes and between node and clients.
- Automatic **Alarm notifications** when monitored parameters (system or network) go beyond a **preset threshold**.
- **Dynamically provides services** (video, audio, data,..) that matches the current resources/capabilities to the end users/applications.
- Access to **real-time and historical data**.



Koala : EVO Client

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Koala

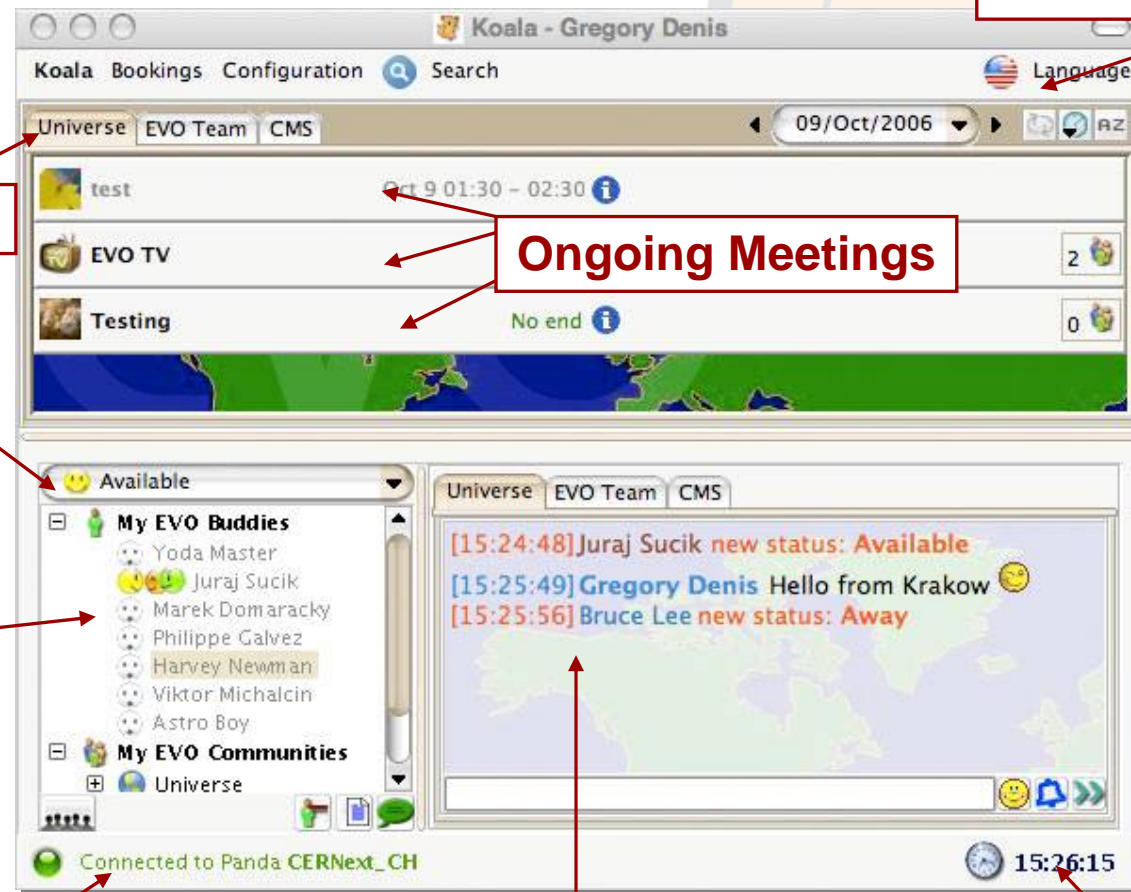
Some functionalities:

- Our **Client** is platform independent: Java Code.
- Automatic **Detection** of:
 - **systems parameters** (CPU, Memory,...)
 - **hardware** components (audio card, video card, ...)
 - **capabilities** in term of service (video, audio, ...)
 - **network environment and capabilities** (wireless environment, DSL, available bandwidth, ...).

Some Functionalities (part 2):

- **Dynamically** get services (video, audio, data,...) that matches the current resources/capabilities to end users/applications.
- **Continuous monitoring** of network quality (packets loss, jitter, latency), and automatic **rerouting of packets**.
- **Automatic Alarm notifications** a when monitored parameters (system or network) go beyond a **preset threshold**.
- **Adaptive configuration** of client applications to fit the current hardware and network capabilities.

Koala Main Interface



Multi language Support

Communities

Ongoing Meetings

Presence

Buddy

Connection to the Panda

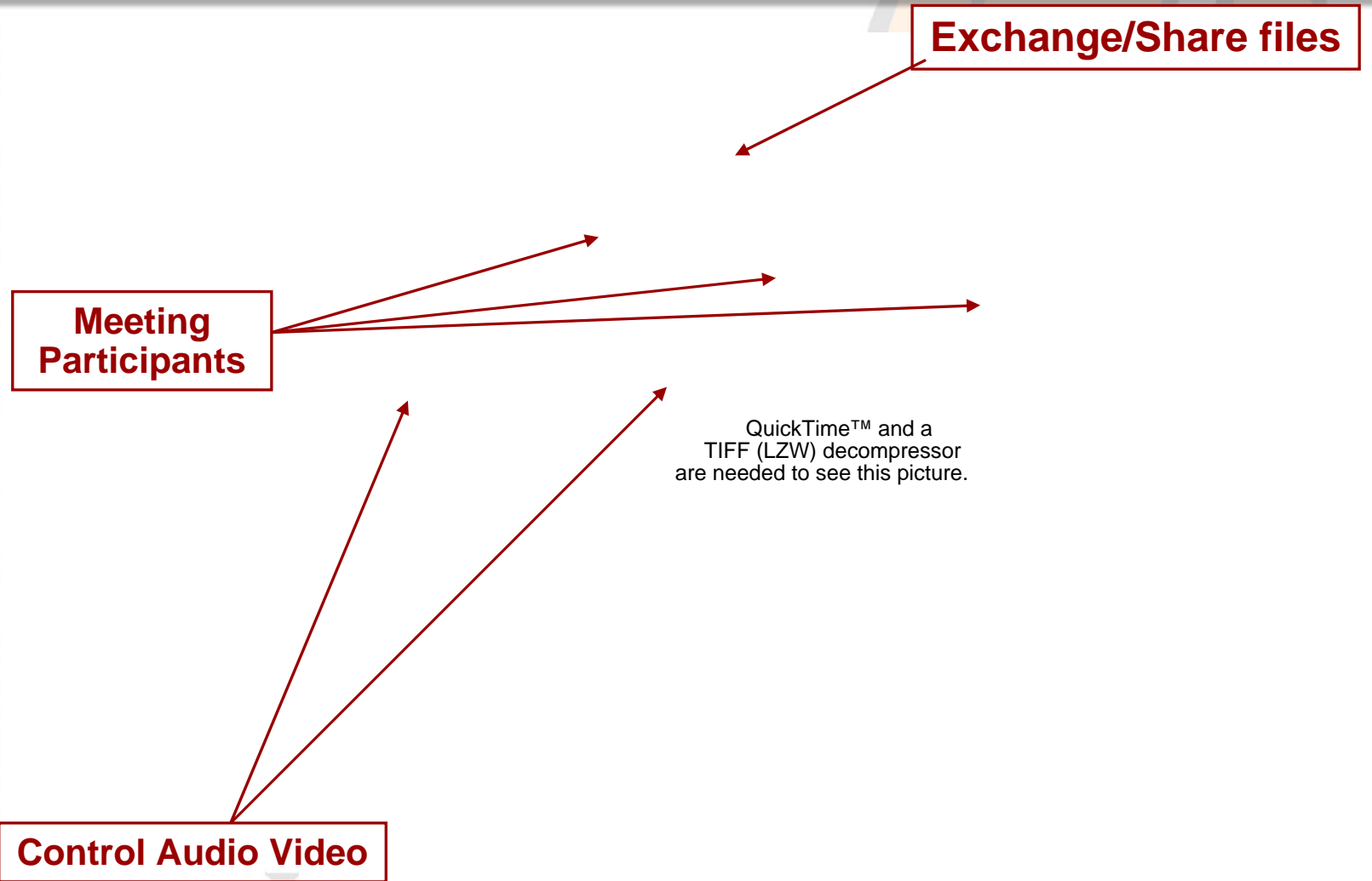
Chat

Automatic Time Zone Adjustment



Koala in Meeting Interface

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Overall System Capabilities(1)

- ★ **Booking:** Book a **schedule meeting**, start an **Ad-hoc** meeting, invite a buddy to a **private meeting**, have **permanent** meeting room.
- ★ **IM Presence** information, **Group and Private** concurrent chat sessions.
- ★ UDP et TCP tunneling in one Port. **Network Address Translation** and **Firewall** transversal.
- ★ **Encrypt** Video and/or Audio and/or IM/Chat and/or data.
- ★ **Sharing of computer screens** between participants of the same meeting.

Use of H.263 codec into EVO

**H.263 XGA
(1024 x 768)**

**H.261 CIF
(352 x 288)**

**H.261 CIF
(352 x 288)**

**H.263 VGA
(640 x 480)**

Viktor Michalcin (VRVS-SK)

Súbor Upravy Priehl'adavac

MAGNETIZATION WIRE.

Bistable Loops

Susceptibility Profile

Distance to one end (cm)

Remanence Profile

L(mm)

General Domain structure

Pyrex coated FeSiBC amorphous microwire

**Tiny Dimensions:
2 mm long
5 μm diameter**

**FeSiBC amorphous wire
10 cm long and 120 μm diameter**

Switching

Remanence

Schematic Domain structure at Remanence

Magnetization Reversal in a single Barkhausen jump

**Summary:
Vázquez, Physica B, 2001**

Size... Dismiss

Pavel Farkas (VRVS)

Size... Dismiss

Viktor Michalcin (VRVS-SK)

18 f/s 3.2 Mb/s (0%)

Michal Pauliny

26 f/s 313 kb/s (0%)

Marek Domarack (VRVS Tea)

25 f/s 1.1 Mb/s (0%)

Display

Dock Display modes Transmit

Minimize

Total Received: 1.6 Mb/s

Settings Help Quit

hp invent Recycle Bin

Start

Total Commander 6.51 ...

VRVS [support] - Mozilla ...

Anglicko-slovenský - Lexi...

VRVS version 3.4 (Virtual...

Vic

Marek Domarack (VRVS T...

Pavel Farkas (VRVS)

Viktor Michalcin (VRV...

9:51 štvrtok



Overall System Capabilities(2)

- ✱ **Administration of meetings:** Become a **meeting moderator**; Mute/Unmute video/audio of a participant, kick-out a participant, add a new participant as moderator.
- ✱ **Share and exchange of files** in a meeting or between 2 EVO users.
- ✱ **Plug-in concept:** communication system and interface is provided to allow additional functionalities (authentication, agenda...).
 - ✱ **API** to allow external development.
- ✱ Support any type of **video client/protocols**: H.323, SIP, AccessGrid, Mbone, etc...
- ✱ **Multilanguage** support, **IPv6** is coming.

New Video Application

VIEVO Prototype :

- Display all the selected videos into a single window.
- Developed in OpenGL technology, that is available in all platforms allows 3D, overlays and real-time text effects.
- Decrease the CPU usage.



Session EVO

With the India President, Dr A.P. J. Abdul Kalam



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EVO Team & Partners

- **3 Developers at Caltech (USA)**
- **3 Developers at UPJS (Slovakia)**
- **IPv6 tests with Renater and their African partners**



Thank you

for your attention and

Bon appetit!

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

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TIFF (LZW) decompressor
are needed to see this picture.

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