The Mconf project

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Agenda

- Background
- A bit of history
- Mconf Academic Network
- Mconf at RNP
- Services by Mconf Tecnologia
- Final remarks
Background

- PRAV research group at Federal University of Rio Grande do Sul
  - Computer Networks and Multimedia
- Many years of experience developing real-time applications
  - Videoconference applied to telemedicine and education
GT-Mconf

- Started in October 2010
- Innovation program by the Brazilian NREN (RNP)
- Proposed by prof. Valter Roesler
- Aimed to build a videoconferencing system easy to use and accessible by computers and mobile devices
Working Groups Program

- Call for proposal once a year
- A few projects selected every year

- 1st year: prototype
- 2nd year: pilot
- 3rd year: service
GT-Mconf

- Research on various applications (video/web conferencing + management), mostly open source

- Isabel Videoconference
- Global Plaza
- Virtual Conference Centre (VCC)
- OpenMeetings
- MediaMosa
- Kaltura
- DimDim
- VMukti
- EVO
- Opencast Matterhorn
- Opencast Steeple
- Access Grid
- CineGrid
- Janet
- BigBlueButton
GT-Mconf

- Back in 2010
  - HTML5 specification was incomplete
  - No WebRTC
GT-Mconf

- Research on various applications (video/web conferencing + management), mostly open source

  - Isabel Videoconference

  - **Global Plaza**
    - Virtual Conference Centre (VCC)
    - OpenMeetings
    - MediaMosa
    - Kaltura
    - DimDim
    - VMukti

  - EVO
  - Opencast Matterhorn
  - Opencast Steeple
  - Access Grid
  - CineGrid
  - Janet

  - **BigBlueButton**
Timeline

RedCLARA Project

mconf.org

Mconf at UFRGS

Internal Service at RNP

RNP
Key aspects of Mconf

Integration
Customization
Open Source
Integration

Organization structure

Web portal

Service 1  Service 2  Web conferencing

Users base

Mconf
Integration

*API

Mconf

*API

Sakai

*API

WordPress

*API
Customization

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Customization
Open source

- Collaborative development
- More developers
- More users
- More organizations working towards the same system

= 

- More solid and stable product
- More reliability and longer life time
- Less dependency on a single service provider
Mconf is not BigBlueButton!

Mconf-Live is based on BigBlueButton

Many contributions from Mconf back to the BigBlueButton core

Collaborative development
  * weekly meetings, shared roadmap
  * developers summits
Main contributions to BigBlueButton

- Window for videos (video dock)
- Videos in the recordings
- Ability to share multiple cameras
- Extensions to the API
- Mobile client with Adobe Air (bbb-air-client)
- Hooks for external applications on events
- Layout module
- ...

...
Only on Mconf-Live

- Shared notes
- Ability to download the presentation and chat
- WebRTC reconnection
- Brandable logo at the top left corner
- Distributed recordings
- Extended status
- Guest access
- Fullscreen
- ...

...
BigBlueButton Foundation

Nonprofit organization responsible for the source code and the brand of BigBlueButton

Funding for developer summits

Mconf Tecnologia is a member of the BigBlueButton Foundation
Summit V: Porto Alegre, Brazil
Summit VI: Ottawa, Ontario
Mconf Academic Network

- Proposed in 2012 at Terena Conference
- Collaborative web conferencing network for academic institutions
- Shared pool of web conferencing servers
Mconf Academic Network

Architecture (simplified):
Main advantages:

- High availability
- Optimization of resources
- Low setup and maintenance cost
- Monitored environment
- Detailed statistics and usage reports
- Institutions manage their own users, their permissions and their data (including recordings)
- Global collaborative open source development
Mconf Academic Network

- 11 partners in 7 countries
- 25 Mconf-Live servers
- 8 Recording servers
Mconf Academic Network
Mconf Academic Network

- Currently managed by Mconf Tecnologia
- Ongoing discussions on having a nonprofit organization for this
Mconf Academic Network

From Jan/2013 to Jun/2015

- Meetings
- Users
Mconf Academic Network

From Jan/2013 to Jun/2015

Hours of conference
Mconf Academic Network

10,000+ meetings
20,000+ hours of conference

* since January 2013
Web conferencing at RNP

Web conferencing service for 100+ institutions in Brazil¹

Thousands of Adobe Connect licenses

¹ http://www.rnp.br/servicos/servicos-avancados/conferencia-web
Mconf at RNP

Isolated infrastructure
  * 8 Mconf-Live servers
  * 1 Recording server
  * 1 Federated web portal

Migrating users to Mconf and gradually reducing Adobe Connect licenses
Mconf at RNP
Mconf at RNP

Numbers from January to June 2015

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<td>1524</td>
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<tr>
<td>Number of users</td>
<td>8232</td>
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<td>Average meeting duration</td>
<td>106.78 minutes</td>
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<td>Maximum number of simultaneous meetings</td>
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<td>Average maximum number of users</td>
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<td>Maximum number of simultaneous users</td>
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User feedback (April to June 2015)

- Common problems:
  - Environment (microphone and camera setup)
  - Network connection
Services by Mconf Tecnologia

Tier 2 support

Customization and deployment

Software development
Development team

- ~15 developers at our research group and company
Roadmap

- Interoperability with videoconference systems, such as Cisco and Polycom, through SIP
- High performance desktop sharing
- Improvements on the mobile integration
- HTML5 client
Final remarks

Many opportunities for collaboration:

- Testing and reporting issues
- Creating documentation
- Developing
- Funding improvements
- Joining the BigBlueButton Foundation
  - Developer Summit in South Africa? 😊
Thank you!

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