Installing Channel Reflector at Your Site

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Channel Reflector

• Agent-based multicast session (or media content) information announcement system
  – Pointing streaming contents and launching application, but not storing contents

• Components
  – Agent
    • Site-local session information is stored in the local storage (MySQL)
    • Global session information is shared among agents (i.e. global storage)
      – But NOT copied/synchronized among agents
  – Web interface
    • Apache + Perl + Catalyst

• Session description
  – SDP-based syntax
  – Metadata support

• Access policy
  – Content management
  – User management
Code Release

• License
  – LGPL

• Site
  – Global CR: http://www.channel-reflector.net
  – Project page: http://www.channel-reflector.org

• Alpha version (v0.1-1) is now released
  – Experimental test with CR WebUI
    • No agent, no access control, only for global session announcement
    • Your site CR accesses our global database

• Version 1
  – Web UI + Agent (with pastry base routing engine)
    • Access control incl. content and user management (with login function)
Content Management

• Global contents without access control
  – Global content information on the global www.channel-reflector.net or your site CR

• [From ver.1] Site-local contents with “network level access control”
  – Only site-local users who can access their site-local CR from “configured” network addresses
    • Site-local administrators can configure site-local scope contents on their CR

• [From ver.1] Group member contents with “user level access control”
  – Only for approved users who can share group/organization/team contents or pay for registered contents
User Management

- **Registrant**
  - Data sender, owner, or administrator who wants to announce session information
  - Registrant MUST login CR (otherwise no “Announcement” menu appeared on CR)

- **Listener**
  - End-user who wants to browse available or scheduled session information
  - Listener can browse available or scheduled “global” session information without login
  - [From ver.1] Listener can browse “all” available or scheduled session information if he/she logsins CR
    - Sessions are selected by listener’s membership states and site-local scope policy
Installation

• Required OS / Kernel
  – CentOS5 (other OSes supported by later version)

• Required Component
  – Apache
  – Perl + Catalyst runtime
  – [From ver.1] MySQL

• CR package and instruction are available at;
  – http://www.channel-reflector.org/
Setup

- We appreciate you to serve site-local CR
  - [Ver.0.1] Experimentation
    - CR v0.1 incl. only WebUI
  - [From ver.1] Distributed agents
    - CR v1 incl. Agent and Web UI
      - Site-local contents can be managed at your site
      - A large number of participations will make good data replication and increase the robustness

- You also can access the global CR without CR package installation
  - If you can serve the global CR (mirroring sites), please contact me!
How End-Users Use It?

- Just access your site-local CR from your Web browser
  - Site CR address must be notified from site administrators to end-users
    - E.g., cr.doit.wisc.edu, cr.global-mix.com
  - [From v.1] Need network level access control
- Or, just access the global CR if no site CR
  - Only global sessions are retrieved
CR WebUI

• Global CR:
  http://www.channel-reflector.net/

• WebUI
  – Home
  – Timetable
  – Search
  – Program Launch
  – Admin
Home (INDEX)

- Picked up contents are shown
  - Orange frame
    - Streaming
  - Green frame
    - Stored content
  - No frame
    - Scheduled

Click thumbnail, and launch player
Timetable

<table>
<thead>
<tr>
<th>Time</th>
<th>0:00</th>
<th>1:00</th>
<th>2:00</th>
<th>3:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kako University</td>
<td>Colors of Japan</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Program Search

• [Search]

• Search Form
  – Contents type
  – Date/Time
  – Category
  – Language
  – Keywords …
Search Result

- Results
  - Thumbnail
  - List view
- Launch player from this page
Search Result

• List View
Session Announcement

• For v0.1, login with the test user ID
  – UID: guest@channel-reflector.net, passwd: guest
  – [Announcement] -> [Add New Content]

• Contents Information
  – Title
  – Date-time
  – Thumbnail Image …

• Location Information
  – URI (metafile)
  – {S,G}
  – MIME type …
Mailing List

• If you are interested in this project, please subscribe and send mail to;
  – cr-users@sfc.wide.ad.jp
  – (For subscribe)
    cr-users-request@sfc.wide.ad.jp

• We appreciate your cooperation !!
  – Serving Site CR, global CR
  – Using as end-users
  – Developing CR with us
    etc.
Let’s enjoy !!