Exploring Visualization Techniques to Enhance Privacy Control UX for User-Managed Access

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UMA Control bridge concept:

- UMA Control bridge is designed to adhere to the user-centric identity paradigm in order to give to the user the capabilities to control what information will be revealed for what purpose and with which parties.
- UMA Control bridge provides a primary user interface for control Resources, Connections, Apps and Requesters.
- UMA Control bridge dashboard provides mainly statistic information about Connections, % shared data for requesters, and a world access view.
- UMA Control bridge incorporates a single view of these main controls, including a notification bar for new access requests and an Access history button.
- Access History button provides a fast historical list of items related to access requests to the authorizing user's information/resources.
- The number of task in the user interaction model is based on 3-steps to get access to specific view, excluding optional view.
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Control bridge

Notification Access requests

Active Connections for Resources

% My shared data

Requester

MySelf

World Access View

> Control Resources and shared data
> View Details

> Control Connections
> View Details

> Control Applications
> View Details

> Control Requesters (Contacts, MySelf, third party)
> View Details

Access History
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Control bridge

Notification Access requests

Personal Data
- Host: Futurebank.com
- Type: Biographical
- Privacy Impact: High
- Registered: 01/29/2010
- Connections: University, Friend, Family

Active Connections

World Access view

Control Resources and shared data
Control Connections
Control Applications
Control Requesters (Contacts, MySelf, third party)

Access History
Control bridge

Notification Access requests

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% My shared data

MySelf

Requester

World Access view

› Control Resources and shared data

› Control Connections

› Control Applications

› Control Requesters (Contacts, MySelf, third party)

Access History
<table>
<thead>
<tr>
<th>View Details</th>
<th>Revoke Connection</th>
<th>View Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank of Future</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Files</td>
<td></td>
<td></td>
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<tr>
<td>Doc4you</td>
<td></td>
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</tbody>
</table>
Control bridge

Notification Access requests

Active Connections for Resources

% My shared data

World Access view

Control Resources and shared data

Search Resource: Bo

Personal Data
Bankfuture.com

Files
Doc4you.com

Control Connections

Control Applications

Control Requesters (Contacts, MySelf, third party)

Access History
Control bridge

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Protected Resource
Privileged App
Connections
Contacts
Control bridge

Requester View

- Connection: Project A
  Allowed Actions:
  ✓ View document

- Connection: For Contributor
  Allowed Actions:
  ✓ Edit document

Show Privileged Apps

Show History

2 new requests

Requester View

- Connection: Project A
  Allowed Actions:
  ✓ View document

- Connection: For Contributor
  Allowed Actions:
  ✓ Edit document

Show Privileged Apps

Show History

2 new requests
Hello Domenico

Control bridge

Notification Access requests

Active Connections for Resources

Contacts

Requester

MySelf

World Access view

Control Resources and shared data

Control Connections

Control Applications

Search Application

Control Requesters (Contacts, MySelf, third party)

Access History
Hello Domenico

Control bridge

Notication Access requests

Active Connections for Resources

Contacts

Requester

% My shared data

MySelf

World Access view

› Control Resources and shared data

› Control Connections

› Control Applications

› Control Requesters (Contacts, MySelf, third party)

Access History
Hello Domenico

Control bridge

Access History

<table>
<thead>
<tr>
<th>Id</th>
<th>Date</th>
<th>Requester</th>
<th>App</th>
<th>Resource</th>
<th>Connection</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>07/07/2011</td>
<td>Alice Anderson</td>
<td>Facebook</td>
<td>Personal Data</td>
<td>University</td>
<td>Success</td>
</tr>
</tbody>
</table>

Back