Open Source Internet Research Tool

Joseph Williams and Paul Stephens
joseph.williams@canterbury.ac.uk

Please contact us with your suggestions.
The Problem

- Gathering evidence online is burdensome
  - No defined protocols in UK
- College of Policing requires a bespoke tool
Requirements

• Case creation
• Evidence gathering:
  – Logging
  – Screen capturing
  – Note taking
  – Hashing
  – Report generation
• Saving and reloading cases
• Open source
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigating Officer</td>
<td>PC J Williams</td>
</tr>
<tr>
<td>Investigating Agency</td>
<td>CCCU</td>
</tr>
<tr>
<td>Operation Name</td>
<td>Buzzard</td>
</tr>
<tr>
<td>Case Reference</td>
<td>CCCU_BUZZ_999</td>
</tr>
<tr>
<td>Evidence Reference</td>
<td>CCCU_BUZZ_999_EVID</td>
</tr>
<tr>
<td>Notes</td>
<td>Checking posts on Facebook</td>
</tr>
</tbody>
</table>

Browser

![Case creation](image-url)
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>URL</th>
<th>Action</th>
<th>Hash Value</th>
<th>FileName</th>
</tr>
</thead>
<tbody>
<tr>
<td>16/03/2015</td>
<td>18:36</td>
<td><a href="http://www.canterbury.ac.uk/computing">http://www.canterbury.ac.uk/computing</a></td>
<td>Loaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16/03/2015</td>
<td>18:37</td>
<td><a href="http://www.canterbury.ac.uk/computing/images/logo.jpg">http://www.canterbury.ac.uk/computing/images/logo.jpg</a></td>
<td>Downloaded</td>
<td>D3092EA5955D4F9B138A44B3E45ED2F4</td>
<td>logo.jpg</td>
</tr>
<tr>
<td>16/03/2015</td>
<td>18:39</td>
<td><a href="http://www.canterbury.ac.uk/computing">http://www.canterbury.ac.uk/computing</a></td>
<td>Screenshot</td>
<td>3150E3CA512F8E1F16C6BB688EB6EB92</td>
<td>cccu_001.jpg</td>
</tr>
<tr>
<td>16/03/2015</td>
<td>18:40</td>
<td><a href="http://www.canterbury.ac.uk/">http://www.canterbury.ac.uk/</a></td>
<td>Loaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16/03/2015</td>
<td>18:43</td>
<td><a href="http://www.college.police.uk/">http://www.college.police.uk/</a></td>
<td>Screenshot</td>
<td>4F286B315B726128100D66CD327A4108</td>
<td>cop_021.jpg</td>
</tr>
</tbody>
</table>

Date Created: 16-03-2015

Constabulary logo

PC J Williams
Canterbury Christ Church University
North Holmes Road
Current Issues

• Screen recording
• Long URLs
• Downloading files
• How to handle external calls
• Dynamic content
• Death of IE...?
Future Work

• Hot swap multiple browser engines
• Scrape, download and hash all files on page
• EXIF viewer
• Multi-platform
• Internationalisation