

## XML Protocol to exchange data with eProof

### 1. Formal description

This protocol is used to communicate between eProof client and eProof server. This protocol is implemented over HTTP protocol. eProof client always initiates transaction, by sending request and receiving response from the server (<req> ... </req> and <resp> ... </resp> correspondingly).

### 2. General information

There are 2 types of corrections – anchor based (annotations) and object based (corrections). Anchor based corrections include geometry data of anchor placement; object based corrections contain reference to page objects (paragraph or image). That is why different requests are used to handle these types of corrections.

#### **2.1 To view (display) corrections:**

The XML requests needed to issue:

- 3.2. List of Anchor Based Corrections (Annotations)
- 3.3. List of Object Based Corrections (only headers)
- 3.8. Request to Load Full Text Correction Data

Needed only in the case the 3rd party application needs to display the original text of the document's text block and highlight the text changes

Note: "Object Based Corrections" are corrections made to image objects or text blocks (objects) in the original document (needed for eProof's unique text correction features). Whereas "Anchor Based Annotations" are normal annotations, which also exist in other products like Acrobat.

#### **2.2. To edit and save corrections:**

The XML requests needed to issue:

- 3.2. List of Anchor Based Corrections (Annotations)
- 3.3. List of Object Based Corrections (only headers)
- 3.9. Request to Lock Correction for Edit
- 3.10. Request to Save Correction After Edit

#### **2.3 To view (display), then to edit and save corrections:**

The XML requests needed to issue:

- 3.2. List of Anchor Based Corrections (Annotations)
- 3.3. List of Object Based Corrections (only headers)
- 3.8. Request to Load Full Text Correction Data
- 3.9. Request to Lock Correction for Edit
- 3.10. Request to Save Correction After Edit

### 3. Requests and Responses

#### **3.1. Handshake**

#### **3.2. List of Anchor Based Corrections (Annotations)**

#### **3.3. List of Object Based Corrections (only headers)**

#### **3.4. List of Objects**

#### **3.5. List New Changes of Annotations**

#### **3.6. List New Changes of Corrections**

#### **3.7. Request to Create a New Anchor Based Correction**

#### **3.8. Request to Load Full Text Correction Data**

#### **3.9. Request to Lock Correction for Edit**

#### **3.10. Request to Save Correction After Edit**

#### **3.11. Request to Save Annotation After Edit**

## Explanations for some of XML fields

`<state>1</state>`

Defines state of correction. Integer value – 0 based index in list of states, defined in `<correction-states>` section of (3.1. Handshake) response. Thus, state '1' means "analyzed" state.

`<rect/>`

Defines type of annotation:

`<point/>` – point;

`<rect/>` – rectangular;

`<oval/>` – oval;

`<free/>` – freehand.

`<x0>4.625739</x0><y0>1.5264938</y0><dx>10.754843</dx><dy>6.984865</dy>`

Left upper corner coordinates and dimensions, relative to the upper left corner of a page, in inches.

### 3.1. Handshake

This request is only needed for the eProof client. Used to transfer configuration data to eProof client (to initialize it).

```
<req><cli-init><cli-version>783</cli-version></cli-init>
  <get-pages/>
</req>

<resp>
  <srv-init>
    <srv-version>4.70.80,4.7.8,1.0.0.968,4.10.968,0</srv-version>
    <properties>
      <channels/>
      <toolbar-buttons>
        <button><name>EditTool</name><top_visible/></button>
        <button><name>HandTool</name><top_visible/></button>
        .
        .
        .
        <button><name>FullScreenMode</name><bottom_visible/></button>
      </toolbar-buttons>
      <corr-print-fields>
        <field><name>modificationdate</name><visible/></field>
        .
        .
        .
        <field><name>date</name><visible/></field>
      </corr-print-fields>
      <correction-states>
        <state><name>open</name><visible/><enabled/></state>
        <state><name>analyzed</name><visible/><enabled/></state>
        <state><name>feedback</name><visible/><enabled/></state>
        <state><name>closed</name><visible/><enabled/></state>
        <state><name>refused</name><visible/><enabled/></state>
      </correction-states>
      <user-name>sadmin</user-name>
      <zoom-levels>
        <zoom-level>25</zoom-level><zoom-level>50</zoom-level>
        <zoom-level>75</zoom-level><zoom-level>100</zoom-level>
        <zoom-level>200</zoom-level><zoom-level>300</zoom-level>
        <zoom-level>400</zoom-level><zoom-level>500</zoom-level>
        <zoom-level>600</zoom-level>
      </zoom-levels>
      <base-zoom-levels> <zoom-level>300</zoom-level>
    </base-zoom-levels>
    <tile-size>2048</tile-size>
    <downsampling>1</downsampling>
    <toolbar></toolbar>
    <text-annot-icon-list></text-annot-icon-list>
    <file-annot-icon-list></file-annot-icon-list>
    <voice-annot-icon-list></voice-annot-icon-list>
    <max-zoom>600</max-zoom>
    <font-changes-allowed>1</font-changes-allowed>
    <move-xy-visible>0</move-xy-visible>
    <show-formatted-editor-menu>0</show-formatted-editor-menu>
```

```

<hide-request-state>0</hide-request-state>
<new-corr-only-for-last-leaf>1</new-corr-only-for-last-leaf>
<process-comment-flt-in-anchorbased-corr>0
</process-comment-flt-in-anchorbased-corr>
<hide-channels-tab-for-mono-jobs>1</hide-channels-tab-for-mono-jobs>
<default-measure-units>inch</default-measure-units>
<job-state>in-dev</job-state>
<ver-state>latest-published</ver-state>
<use-internal-corr-editor>1</use-internal-corr-editor>
<corr-tree-format>%user%: %comment%</corr-tree-format>
<corr-title-format>Created by %user% %date%</corr-title-format>
<cropping-opacity-active>90</cropping-opacity-active>
<cropping-opacity-inactive>10</cropping-opacity-inactive>
<CorrRefreshTimeout>60</CorrRefreshTimeout>
<SkipCorrRefreshTimeout>10</SkipCorrRefreshTimeout>
</properties>
<perms> <corr-manage/><corr-all-modify/><corr-all-remove/><annot-manage/>
</perms>
<proof-print>
<hide-high-resolution/>
<low-resolution>150</low-resolution>
</proof-print>
</srv-init>
<pages>
  <title/>
  <page>
    <page-id>9</page-id>
    <pn>1</pn>
    <width>4958</width><height>3504</height>
    <res-x>300</res-x><res-y>300</res-y>
    <view/>
    <cps><ri>1</ri><dcmyk>4</dcmyk><drbg>2</drbg></cps>
    <sif_0><type>1</type><scale>1</scale><timestamp>1092828340</timestamp></sif_0>
    <sif_1><type>2</type><scale>1</scale><timestamp>1092828340</timestamp></sif_1>
    <channels>
      <channel_0><channel-type>0</channel-type>
        <designer-name>Cyan</designer-name>
        <color-name>Cyan</color-name><color>00FFFF</color>
      </channel_0>
      <channel_1><channel-type>0</channel-type>
        <designer-name>Magenta</designer-name>
        <color-name>Magenta</color-name><color>FF00FF</color>
      </channel_1>
      <channel_2><channel-type>0</channel-type>
        <designer-name>Yellow</designer-name>
        <color-name>Yellow</color-name><color>FFFF00</color>
      </channel_2>
      <channel_3><channel-type>0</channel-type>
        <designer-name>Black</designer-name>
        <color-name>Black</color-name><color>000000</color>
      </channel_3>
    </channels>
  </page>
</pages>
</resp>

```

### 3.2. List of Anchor Based Corrections (Annotations)

```

<req><get-annots><all/></get-annots></req>

<resp>
  <annots>
    <annot>
      <annot-id>51</annot-id>
      <state>1</state><rect/>
      <place>
        <page-id>9</page-id>

```

```

    <x0>4.625739</x0><y0>1.5264938</y0><dx>10.754843</dx><dy>6.984865</dy>
  </place>
  <icon>
    <icon-view>icon-annot-item-big.gif</icon-view>
    <icon-color>0</icon-color>
    <icon-x>15.40371</icon-x><icon-y>8.719518</icon-y>
    <line-width>1</line-width>
  </icon>
  <owner-name>sadmin</owner-name>
  <creation-date>8/18/2004 2:33:47 PM</creation-date>
  <update-date>8/18/2004 2:33:47 PM</update-date>
  <comment></comment>
  <text>fgdfg</text>
  <parent-annot-id>0</parent-annot-id>
  <last-update-sec>97898</last-update-sec>
</annot>
</annots>
</resp>

```

### 3.3. List of Object Based Corrections (only headers)

Note: "Object Based Corrections" are corrections made to image objects or text blocks (objects) in the original document (needed for eProof's unique text correction features). Whereas "Anchor Based Annotations" are normal annotations, which also exist in order products like Acrobat.

Headers are sufficient to highlight corrections on a page and to build correction tree. Complete description of a correction is requested when a user want to view or edit this correction (see 3.8. Request to Load Full Text Correction Data).

```

<req><get-corr-heads><all/></get-corr-heads></req>

<resp>
  <corr-heads>
    <corr-head>
      <corr-id>15</corr-id>
      <state>1</state>
      <prev-id/>
      <page-id>9</page-id>
      <obj-id>561</obj-id>
      <place>
        <page-id>9</page-id>
        <x0>3.30555556</x0><y0>3.5</y0><dx>1.93055556</dx><dy>0.23611111</dy>
        <polygones>3.30555556,3.5,5.23611111,3.5,5.23611111,3.75,3.30555556,3.75
        </polygones>
      </place>
      <text-corr/>
      <owner-name>sadmin</owner-name>
      <update-date>8/18/2004 2:28:58 PM</update-date>
      <comment>sdfsdf</comment>
    </corr-head>
  </corr-heads>
</resp>

```

### 3.4. List of Objects

Returns a list of objects in the document file. Objects in document files are placed images and text block. This Request is needed to create new object based corrections.

```

<req><get-obj-heads><page-id>9</page-id></get-obj-heads></req>

<resp>
  <!-- list of objects for page with ID 9 -->
  <obj-heads>
    <obj-head>
      <obj-id>531</obj-id>
      <obj-name>image0101</obj-name>
      <place>
        <page-id>9</page-id>

```

```

    <polygones>8.18055556,4.23611111,16.75,4.23611111,16.75,
              9.40277778,8.18055556,9.40277778
    </polygones>
  </place>
</img-obj/>
</obj-head>
. . .
<obj-head>
  <obj-id>612</obj-id>
  <obj-name>text0179</obj-name>
  <place>
    <page-id>9</page-id>
    <polygones>16.30555556,0.44444444,16.45833333,0.44444444,
              16.45833333,1.02777778,16.30555556,1.02777778
    </polygones>
  </place>
  <text-obj/>
</obj-head>
</obj-heads>
</resp>

```

### 3.5. List New Changes of Annotations

This request can be used to automatically update a list of annotations/corrections. For example, a 3<sup>rd</sup> party web page displays a list of annotations/corrections and every 5 seconds it calls "List New Changes of Annotations/Corrections" in order to synchronize its list with the eProof server. Any change made in eProof would then be automatically be visible in the 3<sup>rd</sup> party page.

Usage: The first time the eProof server answers with a complete annotations list (see 3.2. List of Anchor Based Corrections/Annotations), the server saves the time stamp of this request; for subsequent calls eProof server answers with annotations, which where created, modified or deleted after previous call.

```

<req><get-annots></get-annots></req>

<resp><annots/></resp>      <!-- empty response - no new annotations -->

```

### 3.6. List New Changes of Corrections

The same as for annotations (3.5). Note: "*Corrections*" are text corrections made to text objects in the document.

```

<req><get-corr-heads></get-corr-heads></req>

<resp><corr-heads/></resp>      <!-- no new or updated corrections -->

```

### 3.7. Request to Create New Anchor Based Correction

```

<req>
  <set-annot>
    <annotation>
      <annot-id>0</annot-id>
      <state>1</state>
      <oval></oval>
      <place>
        <page-id>9</page-id>
        <x>1.4230405</x><y>0.6949733</y><dx>3.210115</dx><dy>5.0302825</dy>
      </place>
      <parent-annot-id>0</parent-annot-id>
      <icon>
        <icon-view>icon-annot-item-big.gif</icon-view>
        <icon-color>ff00ff</icon-color>
        <icon-x>1.1582888</icon-x><icon-y>10.590069</icon-y>
        <line-width>6</line-width>
      </icon>
      <comment></comment>
      <text>Example of oval correction</text>
    </annotation>

```

```

</set-annot>
<get-annots/>          <!-- and request to return updated list -->
</req>

<resp>
<successful/>
<inserted_id>54</inserted_id>
<annots>
  <annot>
    <annot-id>54</annot-id>
    <state>1</state>
    <oval/>
    <place>
      <page-id>9</page-id>
      <x0>1.4230405</x0><y0>0.6949733</y0><dx>3.210115</dx><dy>5.0302825</dy>
    </place>
    <icon>
      <icon-view>icon-annot-item-big.gif</icon-view>
      <icon-color>ff00ff</icon-color>
      <icon-x>1.1582888</icon-x><icon-y>10.590069</icon-y>
      <line-width>6</line-width>
    </icon>
    <owner-name>sadmin</owner-name>
    <creation-date>8/19/2004 5:47:36 PM</creation-date>
    <update-date>8/19/2004 5:47:36 PM</update-date>
    <comment></comment>
    <text>Example of oval correction</text>
    <parent-annot-id>0</parent-annot-id>
    <last-update-sec>1</last-update-sec>
  </annot>
</annots>
</resp>

```

### 3.8. Request to Load Full Text Correction Data

```

<req><get-corr><corr_id>44</corr_id></get-corr></req>

<resp>
  <corr>
    <corr-id>44</corr-id>
    <state>1</state>
    <prev-id/>
    <obj-id>574</obj-id>
    <owner-name>sadmin</owner-name>
    <update-date>8/18/2004 2:33:22 PM</update-date>
    <comment></comment>
    <text-corr>
      <new-text>&lt;p&gt;&lt;font face="Ford-LightExt" size="1"&gt;&amp;#8226; Stereo
radio/cassette, Model 5000 RDS&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-
LightExt" size="1"&gt;EON, removable control panel,
&amp;#8216;Keycode&amp;#8217;&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-
LightExt" size="1"&gt;anti-theft coding, remote control&lt;/font&gt;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt" size="1"&gt;column stalk, 4 speakers
and 6-disc CD&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;autochanger &amp;#8211; Model 2062dfgdfgfdg&lt;/font&gt; &lt;/p&gt;
      </new-text>
      <mx>0</mx><my>0</my>
    </text-corr>
  </corr>
</resp>

```

### 3.9. Request to Lock Correction for Edit

If the response is successful, it is followed by complete description of this correction. This is principal in multi-user environment.

```

<req><lock-corr><id>44</id></lock-corr></req>

```

```

<resp>
  <succesfull/>
  <corr>
    <corr-id>44</corr-id>
    <state>1</state>
    <prev-id/>
    <obj-id>574</obj-id>
    <owner-name>sadmin</owner-name>
    <update-date>8/18/2004 2:33:22 PM</update-date>
    <comment></comment>
    <text-corr>
      <new-text>&lt;p&gt;&lt;font face="Ford-LightExt" size="1"&gt;&#8226; Stereo
radio/cassette, Model 5000 RDS&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-
LightExt" size="1"&gt;EON, removable control panel,
&#8216;Keycode&#8217;&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-
LightExt" size="1"&gt;anti-theft coding, remote control&lt;/font&gt;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt" size="1"&gt;column stalk, 4 speakers
and 6-disc CD&lt;/font&gt; &lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;autochanger &#8211; Model 2062dfgdfgfdg&lt;/font&gt; &lt;/p&gt;
      </new-text>
      <mx>0</mx><my>0</my>
    </text-corr>
  </corr>
</resp>

```

### 3.10. Request to Save Correction After Edit

Server responses with status, followed by updated corrections list.

```

<req>
  <set-corr>
    <correction>
      <obj-id>574</obj-id>
      <corr-id>0</corr-id>
      <prev-id>44</prev-id>
      <state>1</state>
      <comment></comment>
      <text-corr>
        <new-text>&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;&#8226; Stereo radio/cassette, Model 5020 RDS&lt;/font&gt;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt" size="1"&gt;EON,
removable control panel, &#8216;Keycode&#8217;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;anti-theft coding, remote control&lt;/font&gt;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;column stalk, 4 speakers and 6-disc CD&lt;/font&gt;
&lt;/p&gt;&lt;p&gt;&lt;font face="Ford-LightExt"
size="1"&gt;autochanger &#8211; Model 2062dfgdfgfdg&lt;/font&gt;
&lt;/p&gt;
        </new-text>
        <new-plain-text>
_ Stereo radio/cassette, Model 5020 RDS
EON, removable control panel, `Keycode'
anti-theft coding, remote control
column stalk, 4 speakers and 6-disc CD
autochanger - Model 2062dfgdfgfdg
        </new-plain-text>
        <mx>0</mx><my>0</my>
      </text-corr>
    </correction>
  </set-corr>
  <get-corr-heads/>
</req>

<resp>

```

```

<succesfull/>
<inserted_id>55</inserted_id>
<corr-heads>
  <corr-head>
    <corr-id>55</corr-id>
    <state>1</state>
    <prev-id>44</prev-id>
    <page-id>9</page-id>
    <obj-id>574</obj-id>
    <place>
      <page-id>9</page-id>
      <x0>0.77777778</x0><y0>4.84722222</y0><dx>2.01388889</dx><dy>0.65277778</dy>
      <polygones>0.77777778,4.84722222,2.79166667,4.84722222,
                2.79166667,5.5,0.77777778,5.5
    </polygones>
  </place>
</text-corr/>
<owner-name>sadmin</owner-name>
<update-date>8/19/2004 5:50:51 PM</update-date>
<comment></comment>
</corr-head>
</corr-heads>
</resp>

```

### 3.11. Request to Save Annotation After Edit

Server responses with status, followed by updated annotations list.

```

<req>
  <set-annot>
    <annotation>
      <annot-id>36</annot-id>
      <state>1</state>
      <rect></rect>
      <place>
        <page-id>146</page-id>
        <x0>1.3861973</x0><y0>1.6284455</y0><dx>0.88824296</dx><dy>0.60562027</dy>
      </place>
      <parent-annot-id>0</parent-annot-id>
      <icon>
        <icon-view>icon-annot-item-big.gif</icon-view>
        <icon-color>0</icon-color>
        <icon-x>3.4587643</icon-x><icon-y>2.0052757</icon-y>
        <line-width>1</line-width>
      </icon>
      <comment></comment>
      <text>annotedited</text>
    </annotation>
  </set-annot>
  <get-annots/>
</req>

<resp>
  <succesfull/>
  <annots>
    <annot>
      <annot-id>37</annot-id>
      <state>1</state>
      <rect/>
      <place>
        <page-id>146</page-id>
        <x0>1.3861973</x0><y0>1.6284455</y0><dx>0.88824296</dx><dy>0.60562027</dy>
      </place>
      <icon>
        <icon-view>icon-annot-item-big.gif</icon-view>
        <icon-color>0</icon-color>

```

```
<icon-x>3.4587643</icon-x><icon-y>2.0052757</icon-y>
  <line-width>1</line-width>
</icon>
<owner-name>sadmin</owner-name>
<update-date>10/15/2004 3:56:20 PM</update-date>
<comment></comment>
<text>annotedited</text>
<parent-annot-id>36</parent-annot-id>
<last-update-sec>0</last-update-sec>
<creation-date>10/15/2004 3:55:55 PM</creation-date>
</annot>
</annots>
</resp>
```