

# Facsimile

TEI@Oxford

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## Working with facsimiles

Increasingly people want to do not just 'text' editions but text editions with facing page (or otherwise linked) facsimile images. Indeed, some people want to just have images and create an electronic facsimile (perhaps with a view to later eventual transcription). The `<facsimile>` element (a sibling of `<teiHeader>` and `<text>`) is provided to accommodate this desire.

# Digital Facsimiles

- `<facsimile>` contains a representation of some written source in the form of a set of images rather than as transcribed or encoded text
- `<surface>` defines a written surface in terms of a rectangular coordinate space
  - `@start` points to an element which encodes the starting position of the text
- `<zone>` defines a rectangular area contained within a `<surface>` element
- Global `@fac` (facsimile) points directly to an image, or to a part of a facsimile element which corresponds with this element.

## Simplest case: 1:1 mapping with @facs

If a digital text contains one image per page or column (or similar unit), and no more complex mapping between text and image is envisaged, then the @facs attribute may be used to point directly to a graphic resource.

```
<text>
  <body>
    <pb facs="147_13.jpg" n="13"/>
    <div>
      <head>ESSENCE OF PARLIAMENT.</head>
      <p>
<!-- Page 13 continues -->
      </p>
      <pb facs="147_14.jpg" n="14"/>
      <p>Business done. -- The Commons still...
<!-- Page 14 continues -->
      </p>
    </div>
  </body>
</text>
```

## Using *@facs* in conjunction with `<facsimile>`, `<surface>`, and `<zone>`

Using these attributes and elements together enables an editor to

- associate multiple images with each page
- record arbitrary planar coordinates of textual elements on any kind of surface and link such elements to digital facsimile images of them

## <facsimile>

The facsimile element is used to represent a digital facsimile. It appears within a TEI document along with, or instead of, the text element introduced in section 5 Default Text Structure. When this module is selected therefore, a legal TEI document may thus comprise any of the following:

- a TEI Header and a text element
- a TEI Header and a facsimile element
- a TEI Header, a facsimile element, and a text element

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## <facsimile> Example in Context

```
<TEI>
  <teiHeader>
    <!-- teiHeader here -->
  </teiHeader>
  <facsimile>
    <graphic url="147_13.jpg" xml:id="p1"/>
    <graphic url="147_14.jpg" xml:id="p2"/>
    <graphic url="147_15.jpg" xml:id="p3"/>
  </facsimile>
  <text>
    <body>
    <!-- body here -->
    </body>
  </text>
</TEI>
```

## <surface>

The `<surface>` element may be used to indicate that there are two image files corresponding with the same area of the work:

```
<facsimile>  
  <surface>  
    <graphic url="147_13.jpg"/>  
    <graphic url="147_13-huge.jpg"/>  
  </surface>  
  <graphic url="147_14.jpg"/>  
  <graphic url="147_15.jpg"/>  
  <graphic url="147_16.jpg"/>  
</facsimile>
```

## dimensions

The actual dimensions of the object represented are not documented by the surface element; instead, the surface is located within an abstract coordinate space, which is defined by the following attributes, supplied by the `att.coordinated` class:

- `@ulx` gives the x coordinate value for the upper left corner of a rectangular space
- `@uly` gives the y coordinate value for the upper left corner of a rectangular space.
- `@lrx` gives the x coordinate value for the lower right corner of a rectangular space.
- `@lry` gives the y coordinate value for the lower right corner of a rectangular space.

# Example drawing rectangles

JULY 1, 1914.] PUNCH, OR THE LONDON CHARIVARI. 15

**GREAT ECONOMY EFFECTED BY CO-OPERATION IN ADVERTISEMENT.**

**THE MILITANTS' TARIFF.**  
*Eton Lodge, W.*

Mr. Barnham Smasher, having entered into partnership with the Misses Barnham Blazer, as General Agents of Destruction, begs to inform the public that the firm will be prepared to execute commissions of all kinds, at the shortest notice, on the very moderate terms given below:

For breaking windows, per window . . . . .	8 s. 6 d.
For howling, kicking, or biting during services in church, per howl, kick, or bite . . . . .	0 7 6
For sitting on doorsteps of obnoxious persons, per hour, if fine . . . . .	0 15 0
For sitting on doorsteps of obnoxious persons, per hour, if wet . . . . .	1 1 0
For damaging golf greens, per green . . . . .	1 11 6
For throwing shoes at magistrates in court, according to size and weight of shoe, from . . . . .	2 2 0
For beating officials supposed to give justice . . . . .	3 3 0
For slashing and latching valuable pictures, from . . . . .	7 7 0
For bombs not intended to explode . . . . .	8 8 0
For burning down a house, according to value and social position of owner, from . . . . .	10 0 0
For insulting exalted Personages, per insult . . . . .	10 10 0
For burning down a modern red-brick church . . . . .	15 15 0
For burning down a specially valuable and interesting ancient one (eleventh and twelfth centuries extra) . . . . .	21 0 0
For bombs warranted to destroy an ordinary church . . . . .	30 0 0
For bombs suited to wreck really superior buildings, such as Westminster Abbey, and St. Paul's . . . . .	50 0 0

For disturbing public meetings and the general harassing and annoyance of all peaceable and decent people . . . . . No charge.

Barnham Smasher, Barnham Blazer & Co. beg to assure their patrons that all the choppers, hammers, bombs, stones, etc., employed in their business are of the very best quality, and only refined paraffin and wax matches will be used in burning down any building.

Being in a position to offer such exceptional advantages, they trust to receive a large measure of support in their elevating and enlightening work.

If none of the above is found suitable to the needs of intending clients, a further list of assorted outrages will be supplied on application.

**LOVE'S LOGIC.**

My happiness is in another's keeping,  
My heart delivered to a maiden's care,  
And she can cast it down or set it leaping  
(The latter process is extremely rare).  
Ah, would that love indeed had made me blind,  
That I might put her image out of mind!

Yet if I looked at her with eyes unseeing  
Her voice and laughter would not pass unheard;  
I should not be a reasonable being,  
I still should tremble at her lightest word;  
How could I then gain freedom from the spell  
Unless I turned completely deaf as well?

So, blind and deaf, I might perhaps recover  
A partial peace of mind, but all in vain,  
For unseeing pursue the luckless lover,  
And only death can ease him of his pain.  
Thus, having proved that I were better deaf,  
I think I'll go and talk to her instead.

## <surface> Example

```
<facsimile>  
  <surface ulx="0" uly="0" lrx="700" lry="1000">  
<!-- ... -->  
  </surface>  
</facsimile>
```

## <zone> in <surface>

To describe the whole image, we will also need to define a zone of interest which represents an area inside this surface. This zone of interest can be defined by a `<zone>` element, within which we can place the `<graphic>`:

```
<facsimile>
  <surface ulx="0" uly="0" lrx="993" lry="1639">
    <zone ulx="93" uly="681" lrx="967" lry="1568">
      <graphic url="147_13.jpg"/>
    </zone>
  </surface>
</facsimile>
```

## <desc>

The `<desc>` element may also be used within either `<surface>` or `<zone>` to provide some further information about the area being defined.

## <desc> Example

```
<facsimile>
  <surface ulx="0" uly="0" lrx="993" lry="1639">
    <desc>Printed page</desc>
    <zone ulx="96" uly="89" lrx="750" lry="657">
      <desc>Cartoon</desc>
      <graphic url="147_13.jpg"/>
    </zone>
    <zone ulx="95" uly="681" lrx="990" lry="1568">
      <desc>Text section</desc>
      <graphic url="147_13.jpg"/>
    </zone>
  </surface>
</facsimile>
```



## More uses for <zone>

In addition to acting as a container for <graphic> elements, <zone> elements may also be used to select parts of each surface for analytical purposes.

```
<facsimile>
  <surface ulx="0" uly="0" lrx="993" lry="1639">
    <desc>main text</desc>
    <zone ulx="393" uly="681" lrx="967" lry="890">
      <desc>Cartoon</desc>
      <graphic url="147_13.jpg"/>
    </zone>
    <zone ulx="507" uly="596" lrx="704" lry="768">
      <desc>Artist's signature</desc>
    </zone>
  </surface>
</facsimile>
```

# Linking transcription and facsimile

- 1 give each relevant part of the facsimile an identifier
- 2 using the *@facs* attribute, point from the transcription into the `<facsimile>`

# Linking transcription and facsimile: <facsimile>

```
<facsimile>
  <surface ulx="0" uly="0" lrx="993" lry="1639">
    <graphic url="147_10.jpg"/>
    <zone xml:id="cartoonfacs" ulx="96" uly="89" lrx="950" lry="657">
      <desc>Cartoon</desc>
    </zone>
    <zone xml:id="textfacs" ulx="93" uly="681" lrx="967" lry="1568">
      <desc>Text section</desc>
    </zone>
  </surface>
</facsimile>
```

## Linking transcription and facsimile: text

```
<body>
  <pb n="p10"/>
  <div facs="#cartoonfacs">
    <figure>
      <!-- cartoon info here -->
    </figure>
  </div>
  <div facs="#textfacs">
    <head>THE WALKERS</head>
    <lg>
      <l>There were eight pretty walkers...</l>
    </lg>
  </div>
</body>
```

## Pointing from `<facsimile>` to transcription with `@start` attribute

It is also possible to point in the other direction, from a `<surface>` or `<zone>` to the corresponding text. This is the function of the `@start` attribute, which supplies the identifier of the element containing the transcribed text found within the `<surface>` or `<zone>` concerned.

## @start attribute example: <facsimile>

```
<facsimile>
  <surface start="#p10" ulx="0" uly="0" lrx="993" lry="1639">
    <zone xml:id="cartoonfacs2" ulx="96" uly="89" lrx="950" lry="657">
      <desc>Cartoon</desc>
      <graphic url="147_10.jpg"/>
    </zone>
  </surface>
</facsimile>
```

## @start attribute example: text

```
<body>
  <pb xml:id="p10" n="10"/>
  <div>
    <figure>
      <!-- cartoon info here -->
    </figure>
  </div>
  <div>
    <head>THE WALKERS</head>
    <lg>
      <l>There were eight pretty walkers...</l>
    </lg>
  </div>
</body>
```

## Gravestone Example: <facsimile>

```
<facsimile>
  <surface xml:id="grave" ulx="0" uly="0" lrx="355" lry="678">
    <graphic url="gravestone-cropped.jpg"/>
    <zone ulx="83" uly="223" lrx="272" lry="256" xml:id="line1"/>
    <zone ulx="92" uly="251" lrx="256" lry="282" xml:id="line2"/>
    <zone ulx="21" uly="281" lrx="330" lry="308" xml:id="line3"/>
    <zone ulx="36" uly="306" lrx="320" lry="332" xml:id="line4"/>
    <zone ulx="85" uly="535" lrx="249" lry="556" xml:id="line5"/>
    <zone ulx="97" uly="556" lrx="241" lry="576" xml:id="line6"/>
    <zone ulx="58" uly="577" lrx="281" lry="595" xml:id="line7"/>
    <zone ulx="68" uly="595" lrx="271" lry="613" xml:id="line8"/>
  </surface>
</facsimile>
```



## Gravestone Example: text

```
<div facs="#grave">
  <p>Private Moulds' gravestone</p>
  <div>
    <ab>
      <s facs="#line1">12851 PRIVATE</s>
      <lb/>
      <s facs="#line2">H. MOULDS</s>
      <lb/>
      <s facs="#line3">NORTHAMPTONSHIRE REGT.</s>
      <lb/>
      <s facs="#line4">23RD JULY 1916 AGED 21</s>
    </ab>
    <ab>
      <s facs="#line5">LOVING SON OF </s>
      <lb/>
      <s facs="#line6">MRS MOULDS</s>
      <lb/>
      <s facs="#line7">PETERBORO, ENGLAND</s>
      <lb/>
      <s facs="#line8">FOR EVER WITH US</s>
      <lb/>
    </ab>
  </div>
</div>
```

## Gravestone Example: rendered

`http://tei.oucs.ox.ac.uk/Oxford/2009-04-galway/  
facsimile-demo.html`

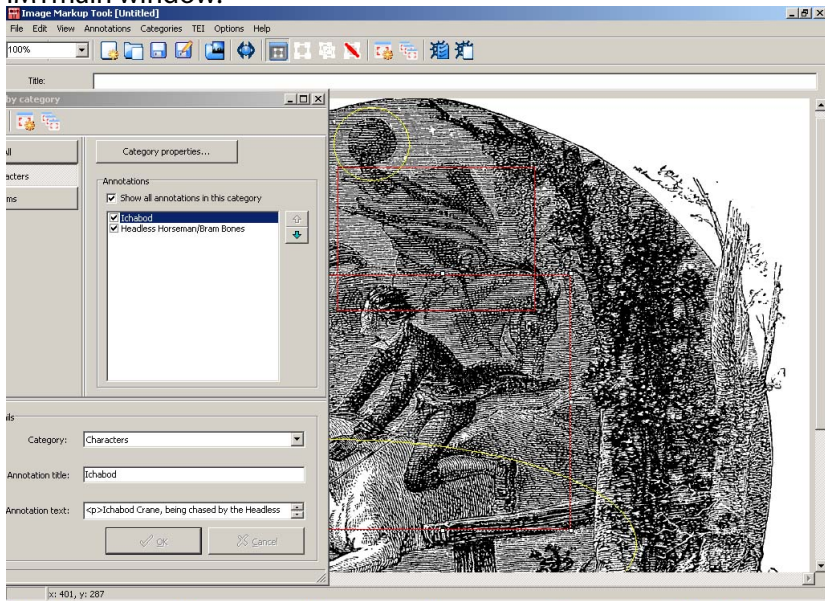
# Introducing the Image Markup Tool



- Written by Martin Holmes at University of Victoria
- Allows image annotation
- Saves its files as pure TEI P5
- [http://www.tapor.uvic.ca/~mholmes/image\\_markup/](http://www.tapor.uvic.ca/~mholmes/image_markup/)
- Main window tutorial
- Annotation window tutorial

# IMT: main window

## IMTmain window:



# IMT: annotation window

## IMTannotation window:

Annotations

**Identify characters in the image**

- Ichabod
- Headless Horseman/Bram Bones

**Items that appear in the images**

- Pumpkin
- Bridge

Done

## Loading and Using Images

- Loading Images:
- **File / New:** starts new image
  - **File / Import:** option of keeping existing annotations and applying to new image
- Using Images:
- **Zooming:** scale toolbar box, or Control + mousewheel
  - **Scrolling:** mousewheel (up/down); Shift + mousewheel (left-right), or scrollbars

## Defining and Editing Categories

- IMT makes you sort your annotations into categories (but which and how many are up to you!)
- You use the 'category manager' to create categories where you can define:
  - an xml:id for identification
  - a title/description of the category
  - a colour for the annotation lines on the image
  - a shape: rectangle (default and only one used in web view), ellipse, cross or spiral

## Adding and Deleting Annotation Areas

- Click on 'Annotations / New annotation' (or button), and a resizable shape will appear on the image
- You can resize and move the area with the mouse
- The area, when selected, will have a white bounding box -- otherwise it will be the colour of its category
- The shape depends on the defined shape in the category you've chosen
- To delete, select it and then click on 'Annotations / Delete annotation' or button -- the associated annotations will also be deleted



## Adding Annotation Text

- When an annotation is added, it has the last category you used
- You can change this to any other category
- You can provide an annotation title (stored as `tei:head`)
- You can provide some text (any `tei:div` content, `tei:p` default)
- You can change the generated `xml:id` with the ID button

## Hiding and Showing Annotations

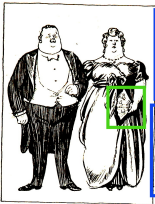
- You can hide and show annotations in the annotations window
- You can select either individual annotations to display
- Or you can choose not to display a whole category of annotations
- This is useful when working with lots of overlapping annotations

## Creating a "Web View"


- As an example IMT produces a 'web view'
- This includes a web page, with slightly shrunk image, where your annotations appear as mouse-over outlines with boxes displaying the annotations
- Double-clicking on an annotation area produces a zoomed in version of the image for that area
- This is really just a proofing tool, but has been used by some as the basis for annotated facsimiles

## Punch

July 1, 1914.] PUNCH, OR THE LONDON CHARIVARI. 15



ARE YOU LIKE THIS?  
THEN ONE MONTH'S TREATMENT WITH JAMES' ANTIMUM WILL MAKE YOU LIKE THIS.



**GREAT ECONOMY EFFECTED BY CO-OPERATION IN ADVERTISEMENT.**

### THE MILITANTS' TARIFF.

*Eten Lolyt, W.*

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I should not be a reasonable being,  
I still should tremble at her lightest word.  
How could I then gain freedom from the spell  
Unless I turned completely deaf as well?

So, blind and deaf, I might perhaps recover  
A partial peace of mind, but all in vain,  
For astororous parrot the backless lover,  
And only death can ease him of his pain.  
Thus, living proved that I were better dead,  
I think I'll go and talk to her instead.

## Two examples

Since *Punch* has so many cartoons, mixed in with text, the output from the IMT could be used with great effect. For example:

<http://tei.oucs.ox.ac.uk/Oxford/2009-04-galway/Punch-IMT/>

For example: <http://www.rch.uky.edu/Pembroke25/IMT/3r/3r.htm>  
uses a customised IMT Web View to provide both line-by-line transcriptions and editorial notes.

# IMT Schemas

It is important quickly to note that IMT XML files are pure TEI P5 XML. The RelaxNG schema is available with the installed program, as is the TEI ODD file that Roma uses to generate this schema.