

## Draft 10 April 2004: DMG, NL

Finding similar phrases operates differently for unrelated documents than related ones. By “related” it is meant that an XML document makes use of a TEI markup strategy to relate a given lexia to a reference text. If this exists, Juxta Author uses it to build the Juxta XML document and does a strict pattern match for comparison.

When dealing with unrelated documents, that is to say documents that haven’t been related line by line, additional pattern matching options are available. For example, when searching on “the quick brown fox” the pattern match would pick up common misspellings or synonyms like “the quick borwn fox” or “the fast brown fox”. Such a fuzzy match algorithm may be helpful to identify interesting deviations. In addition, the fuzzy search should disregard punctuation.

## **Collections**

Collections are sets of textual and graphical objects on which a collation search can be run. The user can build collections of objects by selecting XML and image files from the file system. Once an object is in a collection, it can be added to a juxta comparison or used as the reference document in a collation. The user can save collections and also select the current collection to use for a given collation search.

## **User Interface**

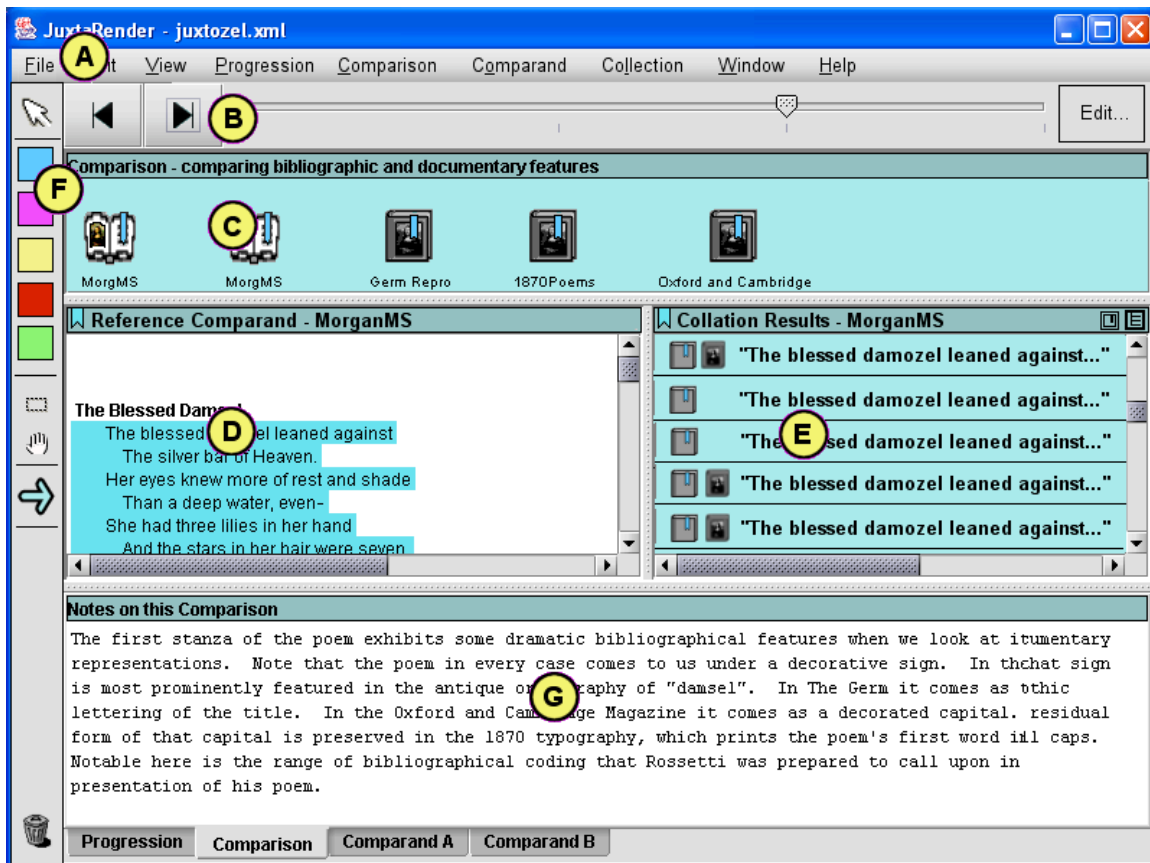
At any moment, two objects are visible, but the user interface should make it easy to call up additional objects. Since a progression is a sequence of comparisons, and a given comparison can refer to separate objects, it is necessary for the interface to make it easy to operate on multiple objects.

Some objects have a paired relationship, such as a page image and its related transcription. The application makes no overt relationship to paired objects, but the user of the Author tool can arrange the progression in such a way to make relationships more apparent.

## 2. User Interface Specification

### Juxta Author Main Window

The main window is where most of the action takes place in Juxta Author.



Juxta Author Main Window

#### Main Window Interface Elements

- A. Main Menu
- B. Progression Bar
- C. Comparison Set Frame
- D. Reference Comparand Frame
- E. Collation Results Frame
- F. Toolbar
- G. Commentary Editor Frame

### Progression Bar

A progression is a linear series of comparison sets. The progression bar displays the progression as a slider bar. The user can adjust the slider bar to view a given comparison set. The VCR style controls to the left of the slider bar allow the user to step forward and backward through the series. There is also a button to add a

new comparison set or remove an existing comparison set. The position of the Progression Bar governs the content of the Comparison Set Frame.

## **Comparison Set Frame**

The Comparison Set Frame displays the currently selected comparison set. The Comparison Set Frame resets within a flexible splitter frame that can be made larger or smaller. Comparands within the comparison set are displayed as icons.

There are two icon types, one for image comparands and another for textual comparands. Comparand icons can be open or closed, marked or unmarked. A comparand is open when it is currently being displayed in the interface, either in one of the frames below the Comparison Set or in a standalone window. Otherwise the comparand is closed. A marked comparand is one for which a focus element has been specified. When a book is first dragged in from a collection, it has no focus and is unmarked.

Comparand icons can be dragged and dropped. Dragging an icon within the comparison set frame repositions the icon within the frame. Dragging an icon to the Reference Comparand Frame makes this icon the new reference comparand. Dragging a comparand icon to the trashcan deletes the comparand. Double clicking on a comparand icon opens up a Comparand Window for the selected comparand. Single clicking selects the icon, allowing the user to rename the comparand.

## **Reference Comparand Frame**

The Reference Comparand Frame displays the text of the reference comparand if it is a textual object or an image of the comparand if it is a graphical object. The user can then perform actions specific to these types, described below.

### **Textual Comparands**

In a textual comparand, the user can identify a focus within the document using a highlighter from the toolbar. This focus can then be used for collation or simply stored for later use. Once a focus for a comparand has been specified, the comparand automatically scrolls and centers on the focus when it is opened.

### **Image Comparands**

In an image comparand, the user specifies the focus using the selection tool from the toolbar. Like textual comparands, once a focus has been specified, the comparand automatically scrolls and centers on the focus when it is opened. The highlighter tool can then be used to color the bookmark.

Image comparands can be zoomed in and out. The max zoom in is a 1:1 ratio between screen pixels and image pixels. The max zoom out is dependent on the size of the frame in which it is being displayed. Pressing the Fit to Window Button zooms the picture out to its max zoom, in which it fits in the constraints of the frame.

## **Collation Results Frame**

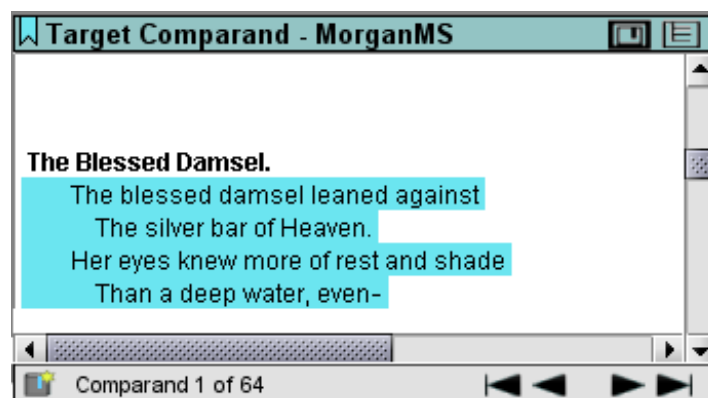
The Collation Results Frame displays the results of a collation search as a list. Collations are searches that are performed using the focus of a reference comparand against a collection of textual objects. For each collation search result, the following information is displayed:

- **Comparand Icon** – An icon is created which matches the color of the highlight on the reference comparand's focus. The user can drag and drop this icon into the comparison set to add this collation results as a new comparand in the comparison set.
- **Image Object Icon** – If there is an image associated with the focus text of this comparand, an image icon is displayed. This icon can be dragged and dropped into the comparison set just as with the comparand icon.
- **Object Name** – The name of the textual or graphical object in which this search result is located.
- **Matched Text** – The text string that matches the focus of the reference comparand on which this collation was run.

In the top right corner of the frame area is a radio button pair that toggles the state of the area between the Collation Results Frame and the Target Comparand Frame.

## Target Comparand Frame

The Target Comparand Frame displays the comparand in the same manner as the Comparand and Reference Comparand Frames. It is special in that it can display a series of comparands. For example, the user runs a collation search and generates 64 search results. The user can inspect the search results in the collation frame but this does not give a view of the document in which the results is found. By switching over into the Target Comparand Frame, the user can then step through each search result, viewing them in the context of the documents in which they reside. The user can also drag and drop comparands in the target comparand frame in order to view them. The user can even drag multiple comparands into the target comparand frame and then step through them as if they where the results of a collation.



*Target Comparand Frame*

Anchored to the bottom of the Target Comparand Frame is a panel that contains VCR like controls for navigating the series of comparands and a text field that shows the length of the list and the current index. A button on the left side of this panel adds this comparand to the current comparison set.

## Toolbar

The toolbar contains the following tools:



### **Selection Cursor**

Clicking on this button returns the cursor to its default state. This is used in conjunction with the comparand highlighters and image comparand tools described below.



## Comparand Highlighters

There are five comparand highlighters in the following attractive colors: cyan, purple, yellow, green and red. The comparand highlighters can be used to highlight specific portions of a textual object. Clicking on a comparand highlighter changes the cursor to a comparand highlighter cursor.

The Comparand Highlighter Cursor can be swiped across a textual object to highlight a particular area of the text. This highlighted area is called the “focus” of the comparand. There is only one focus per comparand selecting another area removes the previously selected area. The highlighter can also be used to change the color of bookmarks on comparand icons in the Comparison Set Frame and the Collation Results Frame.



## Image Comparand Tools

There are two Image Comparand Tools. The first one allows the user to specify the focus area of an image comparand. The second one allows the user to grab and drag this focus area.



## Collate Button

The Collate Button performs a collation using the focus of a reference comparand against a collection of textual objects. The results are output to the Collation Results Frame.



## Trashcan

The user can drag an icon here to remove the selected comparand from the comparison. This does not affect the file on the file system. Pressing the <Delete> key when the object is selected accomplishes the same thing.

## Commentary Editor Frame

The Commentary Editor Frame is an editor frame that allows the user to edit the commentary for the progression, for the current comparison, or for the currently displayed comparands.

## Main Menu

Many of the functions in the main menu are duplicated elsewhere in the application. This is a typical paradigm most users are familiar with in windowed applications. The functions on the menu are listed below.

File->

- New..
- Open..
- Close
- 
- Save
- Save As..
- 
- Exit

Edit->

- Cut
- Copy
- Paste
- Select All

View->

- Collection Window

Progression->

- Add Comparison..
- Remove Comparison..
- 
- Rename Progression..
- 
- Next Comparison
- Previous Comparison

Comparison->

- Rename Comparison..
- Auto Arrange Comparands

Comparand->

- Highlight ->
  - Cyan
  - Purple
  - Yellow
  - Green
  - Red
- 
- Select Image Focus
- Move Image Focus

Collection->

- New Collection..
- Select Collection..
- Rename Collection..
- 
- Import Object..
- Remove Object..

Window->

- <list of open comparand windows>

Help->

- Online Help
- About..

## Comparand Window

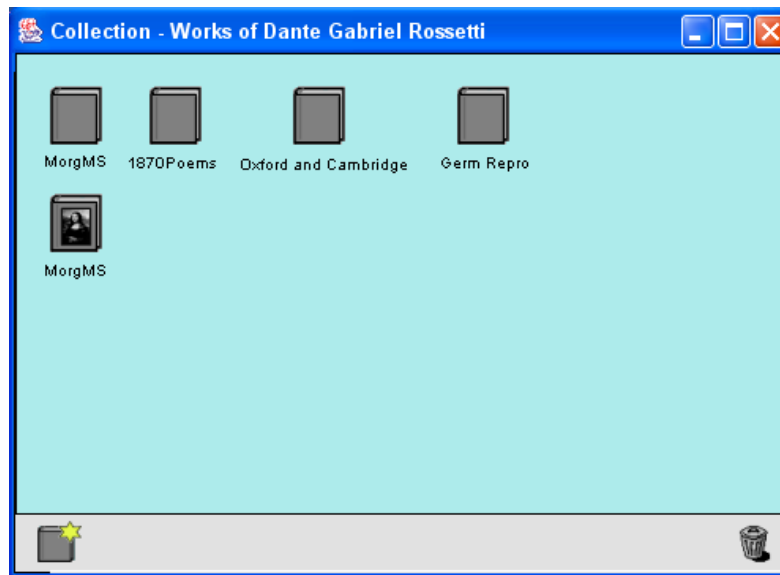
A Comparand Window is simply a free-floating window that displays a given comparand. If the comparand is an image comparand, the zoom in/out and fit to window buttons are present.

The list of Comparand Windows that are currently open is managed in the Main Menu -> Window sub menu. This is a standard interface convention for multi-window applications.

## Collection Window

Collections are sets of textual and graphical objects. They are in a sense, incomplete comparands. The user can add objects to a collection by selecting them from the file system. Valid file types are XML, JPG, and GIF. When selecting an XML file, the user must also specify an XSL file that can be used to display the XML as HTML. A default XSL file is provided for use with valid TEI files.

The Collection Window displays the current collection, showing the objects contained therein as book icons without bookmarks. It is the task of the Juxta Author to open up these books and find the focus element therein and “mark” it. When an object has been added to a comparison set in the currently opened progression, the name of the object is displayed in bold, helping the user keep track of which objects he or she has used thus far.



*Collection Window*

The book icons can be dragged and dropped and re-arranged just as in the Comparison Set Window. The user can drag and drop icons from the Collection Window directly to the Comparison Set Window or to the Reference Comparand Window. Dragging an object to the Reference Comparand Window automatically adds the object to the Comparison Set. Dragging an object to the trashcan removes it from the collection. Double clicking on a book opens up a Comparand Window and displays the object, but without a highlighted focus. Single clicking on a book selects the book allowing the user to rename it.

Anchored to the bottom of the Collection window is a toolbar with the following buttons:

### Import Object

The user can click on this button to import a new object from the file system. An Open File Dialog appears prompting the user for the file to be imported. If the file is an XML file, the user is prompted with a second Open File Dialog for the XSL to use when displaying the object.