

## Creating Interactive Videos -- using XIMPEL<sup>1</sup>

Winoe Bhikharie

Vrije Universiteit Amsterdam

This document serves as an introduction to interactive video, which makes it possible to influence the video you are watching. The interactive video application that is used in this introduction is based on XIMPEL, which is a Flex<sup>2</sup> based framework that enables interactive use of various media like video, text, but also embedded games.

### Part 1: Playing with Interactive Video

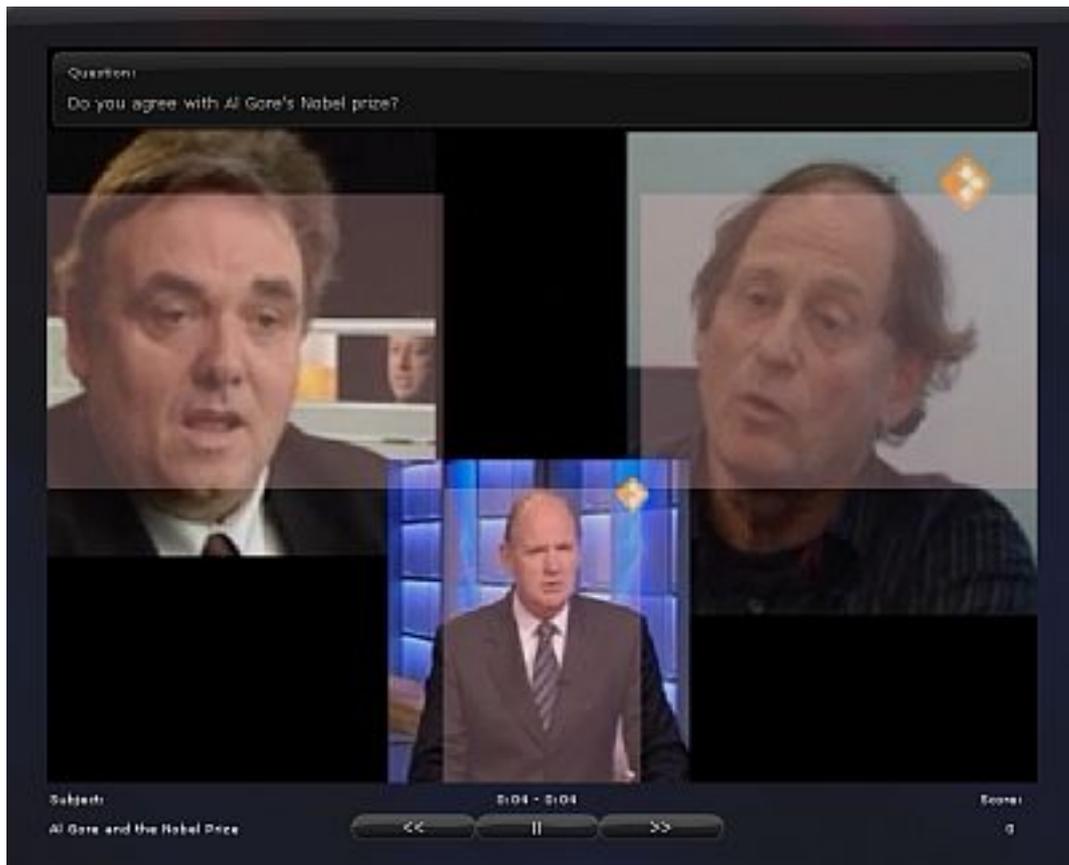


Figure 1: Interactive Video Application

#### Exercise 1

Start the interactive video application by opening "InteractiveVideoApplication.swf". After starting the application, you will see the title screen. Click on the "Next" button to go to the instruction screen. When you have read the instructions, you can start by clicking on the "Start Interactive Video" button. After completing a storyline in interactive video, you will see a list with the storyline you followed and your score.

#### Exercise 2

Play a couple of times with interactive video to find other storylines. Also try to get the highest possible score.

1 <http://www.few.vu.nl/~ximpel/>

2 <http://www.adobe.com/products/flex/>

## Part 2: Editing an Interactive Video Playlist

This part explains how an interactive video playlist is built up.

### Exercise 3

Close the interactive video application and go to the folder "practicum". This folder also contains "InteractiveVideoApplication.swf", along with an installer of "XML Copy Editor" for Windows and the two folders "video" and "XML". Before you start editing, you need to have "XML Copy Editor" installed (available for Windows and Linux). For the latest version, see <http://xml-copy-editor.sourceforge.net/>.

### Exercise 4

Open the file "practicum.xml" from the folder "practicum\XML\" with the program "XML Copy Editor" and review it briefly. This is the playlist you will edit.

The playlist "practicum.xml" looks as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<playlist xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="interactivevideo.xsd">
  <subject name="DorlandKroonenberg">
    <longname>Discussion Dorland and Kroonenberg</longname>
    <score>2</score>
    <videos>
      <video file="DorlandKroonenberg_01"></video>
      <video file="DorlandKroonenberg_02"></video>
      <video file="DorlandKroonenberg_03">
        <question>Van Dorland is against mitigation</question>
        <rightanswer>>false</rightanswer>
      </video>
      <video file="DorlandKroonenberg_04">
        <question>Kroonenberg says we should adapt to climate change</question>
        <rightanswer>>true</rightanswer>
      </video>
      <video file="DorlandKroonenberg_05" repeat="true">
        <branchquestion>Are you worried about the climate?</branchquestion>
        <overlays>
          <overlay position="01" size="12" label="AntiClimateMeasures"
            position2="31" size2="22" label2="ProClimateMeasures"/>
        </overlays>
      </video>
    </videos>
  </subject>
  <subject name="ProClimateMeasures">
    <longname>Yes, and I want climate measures!</longname>
    <score>4</score>
    <videos>
      <video file="Nature_01"></video>
    </videos>
  </subject>
  <subject name="AntiClimateMeasures">
    <longname>No, and I don't want climate measures!</longname>
    <score>3</score>
    <videos>
      <video file="MediocreEnding_01"></video>
    </videos>
  </subject>
</playlist>
```

The playlist is composed in the XML data format. With the program "XML Copy Editor" you can edit the playlist and check it for errors. Checking for errors is done using the rules defined in the file "interactivevideo.xsd", which can be found in the folder "practicum\XML\".

#### **Exercise 5**

Press the F5 key in "XML Copy Editor", with practicum.xml opened. This results in the playlist being checked. If everything is alright, the message "practicum.xml is valid" will appear at the left bottom of the screen. If a playlist contains errors, the first error will be displayed at the bottom of the screen.

The playlist is built up from so-called "tags". A tag is a word surrounded by the "smaller than" and "bigger than" symbols: < and >. Tags are used to define different parts of the playlist. The first tag <?xml version="1.0" encoding="utf-8"?> is used for all XML files and must always be included. The next tag is the <playlist> tag and is closed with </playlist>. Within the <playlist> tags, the playlist is built up. Tags themselves can contain attributes with values. An example is the "file" attribute for the <video> tag.

In the next assignments you will edit the playlist "practicum.xml". You can test this playlist by opening "InteractiveVideoApplication.swf" from the folder "practicum". Every time you make changes to the playlist, you must restart "InteractiveVideoApplication.swf" to see your changes applied.

#### **Exercise 6**

Carefully study the playlist "practicum.xml" and try to find out which text is displayed in the interactive video application.

#### **Exercise 7**

Change the text that is displayed with the first subject.

#### **Exercise 8**

Change the bonus questions that are asked and also find out how you can change the right answer to the bonus question.

Collections of video clips are grouped by subject using the <subject> tags. All video clips are placed within <video> tags and are grouped together within the <videos> tags. The video clips are played according to the order within the <videos> tags. Within each video clip, a link to another subject can be placed. There are two kind of links:

- Automatic links. By placing the "leadsto" attribute together with the name of a subject in a <video>, a link is made to that subject. After the current video clip has been played, a jump is made to play the first video clip of the linked subject.
- Overlay links. These links are visible onscreen as areas that light up when you move your mouse cursor above them. Overlays are defined with <overlay> tags. For each overlay you can define a maximum of three links. Only when you click on one of the lit up areas, you will go to the first video clip of the linked subject. If you do not click on any of the links, the next video clip of the current subject will be played. To define an area you must assign values to three attributes: "position", "size" and "label". Label contains the name of the subject you want to link to. With position and size you determine the the position and size of the overlay area onscreen. The video screen of the interactive video application is divided into 25 fields, each with a unique (row,column) position (figure 2 left). The width and

height of an overlay area is between 1 and 5 fields. An example of a defined overlay area is position (1,2), which is 3 fields width and 2 fields high (figure 2 right). This corresponds to position="12" and size="32" in an <overlay> tag.

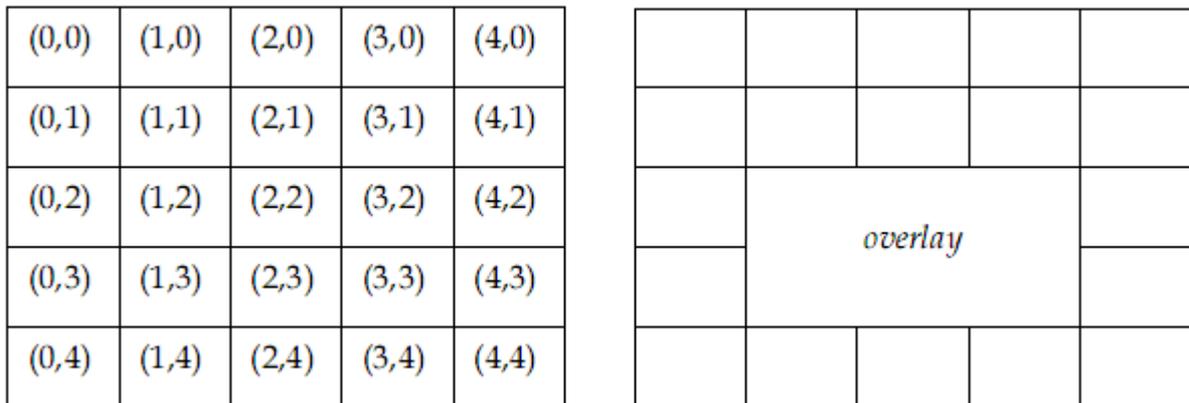


Figure 2: Overlay fields with example

The interactive video application always starts with playing the first video clip of the first subject. When all video clips of the current subject have been played, the interactive video will stop unless a link is made to another subject.

### Exercise 9

Create an overlay link in <video file="DorlandKroonenberg\_02"></video> to the subject "ProClimateMeasures". Do this by defining an area using the position, size and label attributes of the <overlay> tag. As an example you can look at the overlay link already defined in "practicum.xml".

Branch questions are used to make the viewer aware that a choice must be made at a specified moment. To create a branch question in a playlist, you use the <branchquestion> tags in combination with choices that are defined using the earlier mentioned overlay links. Between the <branchquestion> tag you place a question that should be displayed. To enforce that one of the choice links of an overlay is clicked on, you must use the repeat="true" attribute in the <video> tag. The video clip will be repeated until one of the links is clicked on.

### Part 3: Making your own Interactive Video Playlist

To make your own interactive video playlist, you need two parts:

- Description of the video clips in XML
- Flash video clips

The description format has been described earlier in part 2. The necessary Flash video clips can be downloaded from Youtube via the website keepvid.com, which acts as intermediary.

#### Exercise 10

Open the Youtube website (<http://www.youtube.com>) in your browser. Search for a video clip of your choice, preferably between 30 seconds and 1 minute long. On the Youtube page of your chosen video clip you can find a link labeled "URL". Example: "<http://www.youtube.com/watch?v=E1cyUmX5htA>". Copy this link and open the Keepvid website (<http://www.keepvid.com>) in a new browser window. Paste the copied link in the green download bar and click on the "DOWNLOAD" button. A link will appear with the description ">> Download Link <<". This is the direct link to the Youtube video clip. Right-click on the link and save the video clip in the folder "practicum\video\" under a clear name that ends with the extension ".flv". Example: "polar\_bear\_in\_danger\_01.flv".



Figure 3: Youtube video



Download videos DIRECT from most video sites Copy the link of the page with the video on it and paste it here

example: <http://youtube.com/watch?v=WVQZeWoWVng>

Figure 4: Keepvid.com

### Exercise 11

Add the video clip you downloaded in the previous exercise to the playlist "practicum.xml" as the first video of the subject "DorlandKroonenberg". You can do this by assigning the file name (without ".flv" extension!) as the value of the "file" attribute of the <video> tag. Open "InteractiveVideoApplication.swf" to check if the added video clip indeed is played first.

### Exercise 12

Download some additional video clips from Youtube and create your own interactive video playlist. Use the knowledge from the previous parts/assignments.