

## **Instruction for the multimedia lecture preparation**

### **Lecture format:**

One unit may be about 30 min with practices or assignments at the end.

If you have one-hour lecture, for example, it may be broken into the two 30 min sessions.

### **Preparation of synchronized multimedia lectures:**

#### **(1) Preparation of lecture.**

Prepare your lecture in the above format and make PowerPoint files accordingly.

#### **(2) Recording of lecture.**

Record your lectures in video in front of screen showing the PowerPoint slides, just like a talk at the workshop or lecture. Before starting the lecture, activate “Rehearse Timings” in the PowerPoint menu, in order to record the timing of PowerPoint slides during the lecture. We suggest that the video includes the screen as well as yourself. The screen in the video need not be readable, because the PowerPoint slides are shown at the same time in the final product. Use a stick rather than a laser pointer to point out the places in the slide, as the laser may not be visible in the video.

#### **(3) Production of multimedia material from the movie and the PowerPoint slides.**

In this workshop, lectures will be shown as a combination of movie, slides and audio in a synchronized manner. For this purpose, we use the universal SMIL (Synchronized Multimedia Integration Language) format. For more information about SMIL, see the W3C site: <http://www.w3.org/AudioVideo/>.

The movie format used in this workshop will be the RealMedia format, as this is the most common multimedia format. Video files are generally recorded by cameras in some version of MPEG or DVD. These files take lot of space and are not suitable for online delivery. Real (www.real.com) provides an efficient way to share and stream live video. These files come with an extension .rm and can be played with RealPlayer or Windows MediaPlayer. A free version of RealPlayer to play such videos on different platforms can be obtained from www.real.com. To create a .rm file from your video format, you need a video editing or conversion software. For example, Ulead video editor can be used to create .rm files from any well-known video format by clicking on "share" button and then selecting .rm as the final format.

If you have an equipment to synchronize the video with PowerPoint, please make your

product into the SMIL format. The PowerPoint slides should be converted to JPEG images (.jpg). Another file is the Chapter file (.rt) containing the titles of slides (see below). These files are embedded into the SMIL file.

If you do not have such equipment, there are several ways to prepare the final media:

(a) Record your lectures in home video, and send us the video in DVD (MPEG2 format) and the corresponding PowerPoint file. We can make the final product. In this case, the video should include the screen, or the PowerPoint should include the timing data by activating "Rehearse Timings", in order for us to synchronize the PowerPoint slides with the video.

(b) You create the SMIL file by yourself from the video and the PowerPoint slides, by using some authoring tools or your own programs. You can find the tools at:

<http://www.w3.org/AudioVideo/#Authoring>

<http://homepage2.nifty.com/netwarp/smil/player.html>

(c) You can create the SMIL file manually. SMIL is similar to HTML in syntax and it is not so difficult to create it. An example is shown below. The Chapter file containing the titles of slides can also be created manually. An example is shown below. You need to replace portions highlighted in yellow in these files. These examples will be placed at:

<http://gibk26.bse.kyutech.ac.jp/jouhou/abn/elerarn.html>

Place the movie file (.rm), slide file (.jpg) and chapter file (.rt) in the same directory and run RealPlayer to open the SMIL file and test the performance.

[example.smi](#) (this is the SMIL file)

```
<?xml version="1.0" encoding="shift_jis"?>
<smil>
  <head>
    <meta name="title" content="WS_Presentation"/>
    <meta name="author" content="Akinori Sarai"/>
    <meta name="copyright" content="Akinori Sarai"/>
  </head>
  <layout> // This is the portion to describe the layout of movie/slide/title
    <root-layout backgroundColor="#000000" width="960" height="480"/>
    <region id="MainMovie" backgroundColor="#000000" left="0"
      top="0" width="320" height="240" fit="fill" z-index="0"/>
    <region id="Image01" backgroundColor="#000000" left="320"
      top="0" width="640" height="480" fit="fill" z-index="1"/>
  </layout>
</smil>
```

```

        <region id="Text01" backgroundColor="#000000" left="0"
            top="240" width="320" height="240" fit="scroll" z-index="2"/>
    </layout>
</head>
<body>
    <par fillDefault="transition">
        <video src="WS_Presentation.rm" region="MainMovie" id="ID_1" // Movie
file
            begin="0:0" dur="00:13:28"/> // Start time and duration of movie
        
slide
            <param name="bitrate" value="12"/> // Start time and duration of this
            </img>
            .....
            (repeat for each slide)
            .....
            
                <param name="bitrate" value="12"/>
            </img>
            <textstream src="chapter.rt" region="Text01" id="Id_301" // Chapter file
                dur="00:13:28" fit="scroll"/>
    </par>
</body>
</smil>

```

chapter.rt (this is the Chapter file including the title of slides)

```

<window type="geteric" bgcolor="#ffffff" duration="00:13:28" width="280" height="510">
// Total time of movie

<time begin="0:0"/>
<font charset="x-sjis" face="osaka" color="#000000" size="+0"><a
href="command:seek(00:00:00s)">Background </a></font><br/> // Start time of slide and
title of slide
<font charset="x-sjis" face="osaka" color="#000000" size="+0"><a
href="command:seek(00:00:11s)">Introduction </a></font><br/>

```

.....  
(repeat for each slide)

.....  
<font charset="x-sjis" face="osaka" color="#000000" size="+0"><a href="command:seek(00:11:00s)">What does bioinformatics do?</a></font><br/>

</window>