Assignment 10 (HF, major subject)

Due: Wed 18.01.2017; 20:00h (1 Week)

Goals

After doing these tasks...

- you have applied theoretical knowledge about MPEG 7 practically.
- you have refreshed your front-end javascript skills and are prepared for the next week.
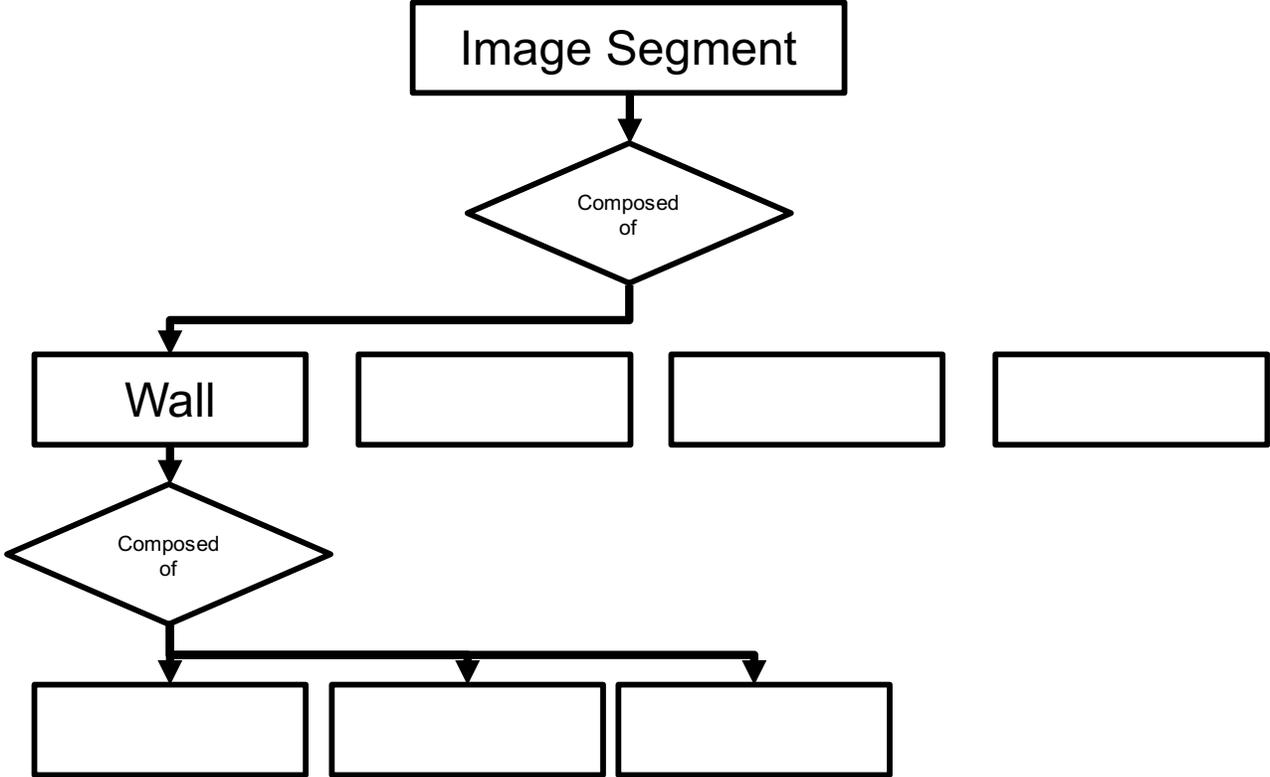
Task 1: Segment Graph   Difficulty: Easy

Photo: Tobias Seitz, 2015

Complete the segment graph diagram on the next page for the picture above.

```
                        ┌─────────────────────┐
                        │   Image Segment     │
                        └─────────────────────┘
                                  │
                                  ▼
                              ◇ Composed ◇
                                of
```

Image Segment

Composed of

Wall

Composed of

Put a PDF file showing the solution into the folder 'task1'.

Task 2: MPEG 7   Difficulty: Easy

Please answer the following questions (1-3 sentences each).

a) Can you use MPEG 7 for analog media? Why (not)?
b) Which has better compression: MPEG 4 or MPEG 7?
c) What are potential reasons why we do not encounter MPEG 7 more often (e.g. for media search)?

Put your responses in a file task2.txt and include it in your submission.

Task 3: Meta Data Bingo   Difficulty: Medium-Hard

In the tutorial, we played "Meta Data Bingo" – a game where you write down 25 terms in random order and then a game-leader calls out questions. You mark the answers to your questions and if you reach a full row / column / diagonal, you shout "BINGO!".

Implement this game for the browser. We provide a small code skeleton to help you get started.

Watch a demo here: https://youtu.be/7w11cVJdPVE

Put all your source code files into a folder "task 3" and include it in your submission.

Here is a list of questions and answers that you can use (but you can also think of new ones, which would be super cool.)

Content consists of meta data and …	Essence
Essence and meta-data combined are called …	Content
You can save meta-data in databases and separate files. Or you handle it differently. How do you call this different approach?	Embedded Meta Data
A standard to describe multimedia contents	MPEG-7
A standard to save metadata to mp3 files	ID3
A still-region in an image is in any case a ...	Spatial Segment
You can relate different segments and visualize the result. How do you call this visualization?	Segment-Graph
In which category of meta-data does „song title" fit?	High-level, structured
In which category of meta-data does the album cover art fit?	High-level, unstructured
In which category of meta-data does „bitrate" fit?	low-level
A famous database to retreive meta-data about music	GraceNote (DB)
How do you call a process to automatically generate low-level meta-data?	Feature Extraction
What is the name of the procedure with which you can recognize music short samples?	Fingerprinting
A sample of a song can be seen as ...	Temporal Segment
What is the most common format to store meta data inside images?	EXIF
A standard that consists of 15 meta-data elements and that is targeted at books, magazines and journals.	Dublin Core
A framework to describe web resources	RDF
The representation of a geometric object	Shape Descriptor
How do you call the process to identify parts of a song or its instruments algorithmically?	Automatic Score Transcription
A company that offers automatic music tagging	Shazam
Which organization created MPEG-7?	Moving Pictures Expert Group
You can split up areas of pictures into ...	Still regions
You can associate segments to one another. How do you call this association?	Structural Relation
An example for a „spatial structural relation"	Above
Which term matches this definition: Anything that can be identified by a URI	Resource

Submission

Please turn in your solution via UniWorX. You can form groups of up to three people.

We encourage you to sign up for Slack! All you need is a CIP account and an email address that ends in "@cip.ifi.lmu.de". Ask us if you don't know how to get them.

If you have questions or comments before the submission, please contact one of the tutors. They are on Slack @tobi.seitz, @peterjuras and @thomas-weber. Remember, that they also want to enjoy their weekends ☺

It also makes sense to ask the question in our #mmn-ws1617 channel. Maybe fellow students can help or benefit from the answers, too!

CodeLabs

As always, everyone is invited to participate in the CodeLabs on Wednesday between 6 and 8 pm. We encourage you to go there if you struggle with installation or nasty bugs that just don't seem to go away. The times are flexible, so you can join anytime during the CodeLab hours.