Exam Questions Introduction Multimedia

1. (*) Give a short description of the contents and structure of your presentation. Indicate how the information contained in your presentation can be made accessible (for example in search).

2. (*) Sketch the developments in multimedia. What do you expect to be the commercial impact of multimedia in the (near) future?

3. Explain what is meant by digital convergence.

4. Which kinds of (digital) convergence do we have?

5. Discuss the relation between the medium and the message.


7. Characterize: HDTV, SDTV, ITV.

8. Discuss convergence with respect to platforms.

9. Discuss convergence with respect to delivery.

10. (*) What factors play a role in the development of multimedia information systems? What research issues are there? When do you expect the major problems to be solved?

11. Define the notion of information spaces?

12. Indicate how multimedia objects may be placed (an queried for) in an information (hyper) space?

13. Characterize the notion of hypermedia.

14. Discuss which developments make a large scale application of multimedia information systems possible.

15. Give a characterization of an object, a query and a clue in an information space.


17. Give a description of the Amsterdam Hypermedia Model.

18. (*) What role do standards play in multimedia? Why are standards necessary for compression and delivery. Discuss the MPEG-4 standard and indicate how it is related to other (possible) standards.
19. What is a codec?

20. Give a brief overview of current multimedia standards.

21. What criteria must a (multimedia) semantic web satisfy?

22. What is the data rate for respectively (compressed) voice, audio and video?

23. Explain how a codec functions.

24. Which considerations can you mention for choosing a compression method?

25. Give a brief description of: XML, MPEG-4, SMIL, RM3D

26. (*) What is meant by the complementarity of authoring and retrieval? Sketch a possible scenario of (multimedia) information retrieval and indicate how this may be implemented. Discuss the issues that arise in accessing multimedia information and how content annotation may be deployed.

27. How would you approach content-based description of images?

28. What is the difference between a metric approach and the transformational approach to establishing similarity between images?

29. What problems may occur when searching in text or document databases?

30. Give a definition of: shape descriptor and property descriptor. Give an example of each.

31. How would you define edit distance?

32. Characterize the notions precision and recall.

33. Give an example (with explanation) of a frequency table.

34. (*) How can video information be made accessible? Discuss the requirements for supporting video queries.

35. What are the ingredients of an audio data model

36. What information must be stored to enable search for video content?

37. What is feature extraction? Indicate how feature extraction can be deployed for arbitrary media formats.

38. What are the parameters for signal-based (audio) content?

39. Give an example of the representation of frame-dependent en frame-independent properties of a video fragment.
40. What are the elements of a query language for searching in video libraries.

41. Give an example (with explanation) of the use of VideoSQL.

42. (*) What are the issues in designing a (multimedia) information system architecture. Discuss the tradeoffs involved.

43. What considerations would you have when designing an architecture for a multimedia information system.

44. Characterize the notion of media abstraction.

45. What are the issues in networked multimedia.

46. Describe (the structure of) a video database, using media abstractions.

47. Give a definition of the notion of a structured multimedia database.

48. Give an example (with explanation) of querying a hybrid multimedia database.

49. Define (and explain) the notion of virtual objects in networked multimedia.

50. (*) Discuss how virtual environments may be used for giving access to (multimedia) information. Give a brief characterization of virtual environments, and indicate how information (hyper) spaces may be projected in a virtual environment.

51. What is meant by virtual context?

52. Give an example of navigation by query, and indicate its possible advantages.

53. Discuss the deployment of (intelligente) navigation agents.

54. Give a brief characterization of: VRML.

55. What is a viewpoint transformation?

56. What kinds of navigation can you think of?

57. How may intelligent avatars be realized? Give an example.