

## E. write an essay!

Even when you prefer to do practical work, it might well pay off to take a step back, reflect on your approach and study one aspect of multimedia in more detail. When you plan to work in an academic situation, it is very likely that at some point you must report about your work and provide some theoretical context to it. These few closing paragraphs are meant to give you some hints about how to approach writing a paper or report.

Independent of how you tackle the process of collecting material, organizing notes and writing it all down, keep in mind that the end result must consist of:

outline

- title – *indicating the topic*
- name – *to tell who you are*
- abstract – *giving the 'message' of your efforts*
- introduction – *clarifying the approach and structure*
- background – *explaining the context of the subject*
- sections – *to elaborate on the subject*
- related work – *characterizing related approaches*
- conclusion(s) – *summarizing the main point(s)*
- references – *listing the literature you consulted*
- appendices (optional) – *providing extra information*

It is surprising how often students forget, for example, an abstract or a proper introduction. Often the familiarity with the material, built up when working with it, seems to make them forget that for the reader these items are important and cannot be missed to grasp the point(s) of their efforts. Also, I wish to note that, although the discipline of giving references is in computer science much less strict than in, for example, philosophy, sufficiently clear references are necessary for the reader to check and verify your claims.

AS I already indicated I do not wish to elaborate on how to gather material, how to organize your collection of potentially useful notes, or how to convert these notes into readable text. Rather, I wish to discuss the distinction, or tension, between form and content. Form, I would say, is determined by the perspective from which you approach the material and the goal you set yourself when writing the paper or report. Possible perspectives, or if you prefer forms, are:

perspective(s)

- review/background – *sketch perspectives, history, viewpoints*
- case study – *analyse assumptions, gather empirical data, and explain!*
- technical analysis – *technology-oriented, work out the details*
- formal study – *clarify in a formal manner, conceptualize and formalize*
- tutorial – *explain for the laymen, but do it very good*

To be clear, the phrase perspectives as used here is only vaguely related to the use of perspectives when used to introduce the parts, where it meant to indicate the scientific discipline or point of view from which to look at a particular topic.

Content, as opposed to form, may be characterized as the collection of possible subjects, which in the area of multimedia include authoring, digital convergence, standards and information retrieval. Obviously, some subjects are better matched with particular forms or perspectives than others. For example, a formal study is suitable for discussing standards, but, to my mind, less so for explaining multimedia authoring. To get an idea of how I look at the problem of reconciling form and content when writing a paper about multimedia, consult the matrix:

	authoring	convergence	standards	retrieval
review/background	-	++	++	+
case study	+	+	+	+
technical analysis	-	++	++	++
formal study	-	-	++	-
tutorial	-	-	?	-

You may wonder why I don't think of tutorials as a suitable form for writing about multimedia. Well, in fact I do think that the form of a tutorial is an excellent way to write about multimedia technology, but it is not a very rewarding form for getting academic credits. When you want to be an academic, you'd better learn to write a technical analysis or case study. However, by that time perhaps the scientific paper generators<sup>1</sup> might have matured to the extent that writing has become a superfluous activity.

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<sup>1</sup>[www.pdos.lcs.mit.edu/scigen](http://www.pdos.lcs.mit.edu/scigen)