



School of Informatics

Scientific Theory in Informatics A1N

CASE STUDY

Overview

The goal of the case study is to assess how well two or more candidate modelling methodologies, core theories, or fundamental techniques might contribute to the effective and efficient delivery of an information system. Specifically, given an application domain, the goal is perform a critical appraisal and comparative analysis of two or more competing models drawn from the material covered in class and deployed in either the computational, cognitive, or socio-technical aspect of that application area. The application scenario to be used is the same as the assignment and will be provided.

Case Study Details

- Each case study will be undertaken individually.
- The application scenario and outline requirements will be provided. It is responsibility of each student to creatively augment these requirements to provide a complete specification of the problem to be addressed and the information system to be developed and deployed.
- Students should use as much material from the course as possible in the investigation, drawing on course notes and supplementary reading.
- The investigation should address *at least* the following.
 1. A specification of the application scenario based on the scenario provided, appropriately augmented to create an interesting and useful information system.
 2. Identification of the specific phase of the development life-cycle that the theory addresses.
 3. Identification of the perspective – computation, cognition, or socio-technology – that the theory addresses.
 4. A survey of possible modelling methodologies, core theories, and fundamental techniques that are relevant to this particular aspect of the information system.
 5. Identification of two or more candidate methodologies, theories, or techniques and a justification for the selection of each one.
 6. Comparative analysis of the strengths and weaknesses of each the methodology, theory, or technique.
 7. An example of how each the methodology, theory, or technique could be used, addressing, e.g., development strategy, design decisions, system performance, user acceptance, and organizational & social impact.

8. Guidelines for the deployment of the methodology, theory, or technique in this application domain.
 9. Conclusions regarding the relative merits of each methodology, theory, or technique and its applicability in the chosen domain.
- The case study is to be documented in a type-written report.

Submission Deadline

A typed report is to be submitted by email to david.vernon@his.se no later than 17:00 on Wednesday of week 50.

Assessment

As part of the assessment of the case study, students are required to prepare and present a 15-minute talk on the case study, allowing 10 minutes for a presentation and 5 minutes for questions. The presentation should address all of the case study details set out above. All students should attend these presentations.

Marks will be awarded for both the report and the presentation. A maximum of 80 marks will be awarded for the report. A maximum of 20 marks will be awarded for the presentation: 15 marks for content and 5 marks for delivery.

The full schema for mark allocation is shown in the following marking sheet.



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Scientific Theory in Informatics A1N

CASE STUDY MARKING SHEET

Student Name: _____

Student Id. Number: _____

Title of Case Study: _____

Advisor: _____

Second Marker: _____

Completed by: ☐ Advisor ☐ Second Marker

	Maximum Mark	Assigned Mark
Report		
Specification of the application scenario	5	
Phase of the development life-cycle that the approach addresses	5	
Identification of the perspective that the approach addresses	5	
A survey of possible approaches	10	
Identification and justification of two or more candidate approaches	5	
Comparative analysis of strengths and weaknesses of each approach	30	
Example of how each approach could be used	20	
Guidelines for the deployment of each approach	10	
Conclusions regarding the relative merits of each approach	10	
Total	100	
Presentation (individual mark for each student)		
Content: clear, concise, instructive, interesting	75	
Delivery: clear, confident, well-paced delivery; engaging	25	
Total	100	

Assessment Procedure

The case study advisor and second-marker mark the case study using the marking sheet provided.

Both case study advisor and second marker must complete a separate assessment sheet and should do so independently. Observations and remarks should be recorded in the appropriate sections. The second marker should only consult the advisory to clarify any technical points and should not discuss the mark being awarded by either party. Both sheets are then submitted to the course director for data entry and calculation of the final mark.

Procedures for Resolving Problems

If the mark awarded by the advisor and the second marker differ by 10 or more marks, then the advisor and the second marker should meet to see if the matter can be resolved either by:

- (a) agreeing that an average of the two marks is a fair and acceptable compromise, or
- (b) agreeing that one or both of the sets of marks be adjusted to reflect any ensuing clarification.

If no agreement is achieved, then a third marker is used. The third marker repeats the procedure that was followed by the second marker, except that he or she does not award marks for the presentation. Normally the third marker is appointed by the course director after consultation with the advisor.

If the difference in marks is below 10 marks and the advisor is satisfied then under normal circumstances the average of the two marks will be taken as the final mark, although a slight deviation one way or the other can be accommodated at the request of the advisor or second marker. If he or she wishes, the advisor may request a third marker.

Once the third marker has marked the report the course director calls a meeting, which she or he chairs. The advisor, the second marker, and the third marker discuss the case study in an attempt to resolve the issue. If no compromise can be arrived at then the course director will read the report, interview the student, and decide on a final mark.