

THE 11 - SOFTWARE ENGINEERING 1 SAMPLE ANSWER  
9/11 2002 P2a7  
THE COODO AMBULANCE SYSTEM (LAS) INITIALLY WENT THROUGH THE TENDER STAGE, WHEN A LOW BID WAS ACCEPTED, DESPITE EVIDENCE THAT THE SUPPLIERS DID NOT APPRECIATE THE COMPLEXITY OF THE SYSTEM REQUIREMENTS, AND CONSULTANTS HAD ESTIMATED MUCH HIGHER COSTS. IN CAPSA, THE DEVELOPMENT WORK WAS DONE INTERMITTENTLY, AND FEW PEOPLE APPRECIATED IN ADVANCE THE POTENTIAL EXPENSE OF THE SOLUTION. CAPSA USED A COST PRODUCT (ALTHOUGH NOT A PARTICULARLY STABLE ONE), AND INCURRED PROBLEMS IN TRYING TO ADAPT IT TO THE ALREADY WORKING OF THE UNIVERSITY. LAS COMMISSIONED A BESPOKE SYSTEM, BUT FAILED TO ENSURE THAT IT COULD HANDLE THE ACTUAL TRANSACTION LOAD. CAPSA ALSO SUFFERED FROM THIS PROBLEM. BOTH SYSTEMS REQUIRED VERY LENGTHY AND EXPENSIVE REMEDIAL ACTIONS. (6)

(6) LAS \* WAS TESTING, PERHAPS IN CONJUNCTION WITH PARALLEL OPERATION. THIS WOULD HAVE IDENTIFIED PERFORMANCE PROBLEMS, BUT POTENTIALLY WITH HIGH TESTING COSTS. IF PARALLEL OPERATION WAS UNSAFE DUE TO DISRUPTION OF SERVICE \* REQUIREMENTS DEFICITS THAT INCLUDED PERFORMANCE FACTORS - THESE COULD THEN BE USED AS THE BASIS FOR VALIDATION. THERE WOULD BE NO REAL DISADVANTAGE - PERHAPS ONLY AN EARLIER DISCOVERY OF THE PROBLEM (AND THENCE LOWER COST OF RECTIFICATION).

CAPSA \* APPLICATION OF THE CAPABILITY MATURITY MODEL TO ASSESS THE READINESS OF THE ORGANISATION TO UNDERTAKE SUCH A LARGE PROJECT. THE DISADVANTAGE MIGHT BE CANCELLED OUT OF THE WHOLE PROJECT \* MONITORING OF PROGRESS VIA A METRIC SUCH AS FUNCTION POINT ANALYSIS. WOULD HAVE SOME OVERHEAD COST, BUT WOULD IDENTIFY RISK AND COST OVERRUN EARLIER \* MORE COMPLETE INVESTIGATION OF REQUIREMENTS BEFORE CHOOSING SOLUTION. THIS MIGHT HAVE LED TO A BETTER ASSESSMENT OF COSTS, BUT POTENTIALLY USERS MIGHT NEGOTIATE COMPROMISE MORE SUITED TO AVAILABLE PACKAGES. (14)

PART A

TWO MARKS FOR EACH COMPARISON OR  
CONTRAST, ASSUMING THAT SUITABLE ASPECTS  
OF THE PROJECTS ARE IDENTIFIED (3x2)

PART B

ANY PART OF THE COURSE COULD POTENTIALLY BE  
INTRODUCED HERE, BUT MUST BE RELATED IN SOME  
WAY TO A PROBLEM THAT WAS OBSERVED IN THE  
CASE STUDIES.

- 1 MARK PER TECHNIQUE
- 1 MARK PER ADVANTAGE
- 1 MARK PER DISADVANTAGE