A1: Architecture Decisions

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A1L: Language Spelling, Wording, Grammar, Sentence Structure, Paragraph Structure, Flow, Voice	There are no errors that impair the flow of communication. (Perfect with < 2 errors)	Occasional errors that have only minor impact on the flow of communication. (A few minor errors)	Frequent errors that impede the flow of communication. (A few more serious errors)	Errors are serious and numerous. Reader must stop and reread and many struggle to discern the authors meaning. (Multiple, serious errors)
A1AS: Assumptions and Scope Assumptions on system and system users	Own Assumptions are clearly discussed. Both on system and system users. Made assumptions improve the understanding for the scope of the system.	Own Assumptions are listed. Both on system and system users. Made assumptions improve the understanding for the scope of the system.	Some own Assumptions are listed. On system OR system users.	Own Assumptions are not mentioned.
A1IAS: Initial Architecture Style Starting point	There is a clear description with a clear motivation of an overall architecture style for the system. Alternative architecture styles are discussed.	There is a clear description with a motivation of an overall architecture style for the system. Alternative architecture styles are listed with a brief motivation for why they are not selected.	There is a description of an overall architecture style for the system.	There is no description or an unclear description of an overall architecture style for the system.
A1TFT: Technological Factor Tables Factors, Flexibility & Changeability, Impact. Hardware, Software, Architecture Technology, and Standards	All relevant factors are listed, together with an assessment of their Flexibility & Changeability and Impact.	Most relevant factors are listed, together with an assessment of their Flexibility & Changeability and Impact	Factors are listed, together with an assessment of their Flexibility & Changeability and Impact. Some important factors are missed. The Flexibility, Changeability and/or Impact are inaccurate for some.	Some factors are listed. The Flexibility, Changeability and/or Impact are inaccuratetely described
A1PFT: Product Factor Tables Factors, Flexibility & Changeability, Impact. Functional Features, User Interface, Performance, Dependability, Maintenance, Testing, Budgets	All relevant factors are listed, together with an assessment of their Flexibility & Changeability and Impact.	Most relevant factors are listed, together with an assessment of their Flexibility & Changeability and Impact.	Factors are listed, together with an assessment of their Flexibility & Changeability and Impact. Some important factors are missed. The Flexibility, Changeability and/or Impact are inaccurate for some.	Some factors are listed. The Flexibility, Changeability and/or Impact are inaccuratetely described.

— Rubric continued on next page —

PTO

A1: Architecture Decisions

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A1ST: Strategy Tables Issue, Influencing Factors, Solution, Strategies	All issues are non-trivial and have a relevant architectural impact, and all solutions/strategies are relevant for each identified issue. The issues are primarily solved in software, and the exceptions are well motivated.	Most issues are non-trivial and have a relevant architectural impact, and the solutions/strategies are somewhat applicable for each identified issue. The issues are mostly solved in software, and the exceptions are well motivated.	Many issues are trivial or do not have any relevant architectural impact, or the solutions/strategies are insufficient for each identified issue.	The issues are trivial or do not have any relevant architectural impact, and the solutions/strategies are insufficient for each identified issue.
A1SMC: Strategy Mapping to Conceptual View Mapping of Strategies to Conceptual View	All, and only, issues, strategies, and factors that are relevant to address in the conceptual view are listed. There is a clear and well motivated mapping from issues/strategies to the design elements.	Most issues, strategies, and factors that are relevant to address in the conceptual view are listed. There is a clear mapping from issues/strategies to the design elements, but some parts of the design are unmotivated.	Some issues, strategies, and factors that are relevant to address in the conceptual view are listed, with a somewhat unclear mapping to the design elements, but there are several omissions. Mapping severely lacks motivation.	Only a few issues, strategies, and factors that are relevant to address in the conceptual view are listed. The mapping to the design elements is unclear and/or not motivated, and there are more than several omissions.
A1CV: Conceptual View Components, Connectors, Logical Control Flow	Notation is rigorously followed. Connectors are clearly and correctly identified and typed, Components have well defined interfaces. The control flow is easy to follow. Architecture is shortly explained in text, alternatives are discussed.	Notation is followed. Most connectors are clearly and correctly identified and typed, Most components have well defined interfaces. The control flow is easy to follow. Architecture is overly long explained in text, alternatives are discussed	Notation is followed. Architecture is overly long explained in text OR not explained at all, no alternatives are discussed.	Notation is not followed. Architecture not explained in text.

Rubric created June 25, 2013.

A2: Personal Reflections

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control

There are no rubrics for this assignment. Your answers are marked in the usual way for [home] exam questions.

Rubric created June 25, 2013.

A3: Architecture Design

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A3L: Language Spelling, Wording, Grammar, Sentence Structure, Paragraph Structure, Flow, Voice	There are no errors that impair the flow of communication. (Perfect with < 2 errors)	Occasional errors that have only minor impact on the flow of communication. (A few minor errors)	Frequent errors that impede the flow of communication. (A few more serious errors)	Errors are serious and numerous. Reader must stop and reread and many struggle to discern the authors meaning. (Multiple, serious errors)
A3R: Revisit Assignment 1 The degree to which feedback on Assignment 1 has been taken care of. *Note:* This is not included in the grade for Assignment 3, but is used to adjust the grade on assignment 1.	All issues raised have been adequately taken care of and the changes are clearly documented.	Most issues raised have been adequately taken care of and the changes are clearly documented, but with some exceptions.	Some issues raised have been partially taken care of and the changes are documented.	There are critical issues that have not been adequately taken care of. Changes are not properly documented.
A3SMM: Strategy Mapping to Module View Mapping of Strategies to Module View	All, and only, issues, strategies, and factors that are relevant to address in the module view are listed. There is a clear and well motivated mapping from issues/strategies to the design elements.	Most issues, strategies, and factors that are relevant to address in the module view are listed. There is a clear mapping from issues/strategies to the design elements, but some parts of the design are unmotivated.	Some issues, strategies, and factors that are relevant to address in the module view are listed, with a somewhat unclear mapping to the design elements, but there are several omissions. Mapping severely lacks motivation.	Only a few issues, strategies, and factors that are relevant to address in the module view are listed. The mapping to the design elements is unclear and/or not motivated, and there are more than several omissions.
A3MV: Module View Subsystems, Modules, System Decomposition	Notation is rigorously followed. All elements from the Conceptual View are clearly mapped to the elements in the Module View. Architecture is shortly explained in text, alternatives are discussed.	Notation is followed. Elements from the Conceptual View are mapped to the elements in the Module View, but some parts of the design are unmotivated. Architecture is overly long explained in text, alternatives are discussed.	Notation is followed. Some elements from the Conceptual View are mapped to the elements in the Module View, but there are several omissions. Architecture is overly long explained in text OR not explained at all, no alternatives are discussed.	Notation is not followed. Elements from the Conceptual View are not mapped to the elements in the Module View. Architecture not explained in text.

— Rubric continued on next page —

PTO

A3: Architecture Design

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A3SME: Strategy Mapping to Execution View Mapping of Strategies to Execution View	All, and only, issues, strategies, and factors that are relevant to address in the execution view are listed. There is a clear and well motivated mapping from issues/strategies to the design elements.	Most issues, strategies, and factors that are relevant to address in the execution view are listed. There is a clear mapping from issues/strategies to the design elements, but some parts of the design are unmotivated.	Some issues, strategies, and factors that are relevant to address in the execution view are listed, with a somewhat unclear mapping to the design elements, but there are several omissions. Mapping severely lacks motivation.	Only a few issues, strategies, and factors that are relevant to address in the execution view are listed. The mapping to the design elements is unclear and/or not motivated, and there are more than several omissions.
A3EV: Execution View Runtime Entities, Communication Paths, Execution Configuration	Notation is rigorously followed. All elements from the Module View and Conceptual View are clearly mapped to the elements in the Execution View. Architecture is shortly explained in text, alternatives are discussed.	Notation is followed. Elements from the Module View and Conceptual View are mapped to the elements in the Execution View. Architecture is overly long explained in text, alternatives are discussed.	Notation is followed. Some elements from the Module View and Conceptual View are mapped to the elements in the Execution View. Architecture is overly long explained in text OR not explained at all, no alternatives are discussed.	Notation is not followed. Elements from the Module View and Conceptual View are not mapped to the elements in the Execution View. Architecture not explained in text.
A3SE: Self-Evaluation of Architecture	The choice of evaluation method and the reasons for rejecting other methods is well described and motivated. The chosen evaluation method is suitable for the goal of the evaluation. The evaluation is thorough and relevant issues are highlighted.	The chosen and rejected methods are described, choice is motivated. The chosen evaluation method is suitable for the goal of the evaluation. The evaluation lacks in thoroughness but some relevant issues are highlighted.	Other methods are mentioned. It is unclear whether the chosen evaluation method is suitable for the goal of the evaluation since it is not motivated. The evaluation lacks in thoroughness and only a few relevant issues are highlighted.	Other methods are not mentioned. The chosen evaluation method is not suitable for the goal of the evaluation. The evaluation is shallow and no relevant issues are highlighted.
A3AT: Architecture Transformation Changes done to the architecture as a result of evaluations.	Findings from the evaluation are discussed. Different solutions/transformations to the issues found are discussed. The selected transformations clearly solve the problems in an efficient way.	Findings from the evaluation are discussed. The selected transformations solve the problems.	Findings from the evaluation are summarised. The selected transformations may solve the problems.	The proposed transformations will not solve the problems OR no transformations proposed, based on a shallow evaluation.

Rubric created June 25, 2013.

A4: Formal Specifications

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A4L: Language Spelling, Wording, Grammar, Sentence Structure, Paragraph Structure, Flow, Voice	There are no errors that impair the flow of communication. (Perfect with < 2 errors)	Occasional errors that have only minor impact on the flow of communication. (A few minor errors)	Frequent errors that impede the flow of communication. (A few more serious errors)	Errors are serious and numerous. Reader must stop and reread and many struggle to discern the authors meaning. (Multiple, serious errors)
A4RAE: Resource Allocation Evaluation Model extension, evaluation result, choice of hardware platform	All required budgets were added to the model and are described in the report. Design constraint (processes "ActuatorInterface" and "ControlActuators" allocated to the same cpu) considered. The results of the evaluation are reported. One hardware platform selected and choice is motivated.	All required budgets were added to the model and are described in the report. Design constraint (processes "ActuatorInterface" and "ControlActuators" allocated to the same cpu) considered. The results of the evaluation are reported. One hardware platform selected but choice is not motivated.	All required budgets were added to the model. The results of the evaluation are reported. One hardware platform selected but choice is not motivated.	Not all required budgets were added to the model. No evaluation results are reported. No hardware platform chosen.
A4LE: Latency Evaluation Model extension, evaluation result	Flows for both scenarios are added to the model and described in the report. The results of the evaluation are reported. Conclusions are stated.	Flow for the first scenario is added and described in the report. Flow for the second scenario is incomplete. The results of the evaluation are reported. Conclusions are stated.	Both flows are incompletely modeled. Some results are reported. Conclusions are stated.	Flows are incompletely modeled such that no evaluation can be performed. No conclusions stated.
A4C: Challenges How to tackle obstacles, problem-solving abilities	Diversification of challenges w.r.t. understanding and to extending the model. Both solved and unsolved challenges are discussed. Challenges are not trivial. Solutions to challenges are thought through (i.e. worth sharing).	Both solved and unsolved challenges are reported. Challenges are not trivial. Solutions to challenges are thought through (i.e. worth sharing).	Solved challenges are reported. Some challenges are trivial (i.e. solvable by some research and skimming the study packages). Not many solutions reported.	Reported challenges are very trivial or blame the tool/teacher/material. No solutions reported.
A4R: Reflection Benefits and liabilities of formal specifications	There is a thorough discussion of whether the model is complete w.r.t. the system description. Evaluation approach from Assignment 3 is shortly described. Both benefits and liabilities (not trivial) of formal specification and evaluation are discussed.	There is a discussion of whether the model is complete w.r.t. the system description. Both benefits and liabilities of formal specification and evaluation are discussed.	There is a discussion of whether the model is complete w.r.t. the system description. Only liabilities of formal specification are discussed.	There is no discussion of whether the model is complete w.r.t. the system description, or the conclusions therefrom are trivial or incorrect. Benefits and liabilities are trivial or not discussed at all.

Rubric created June 25, 2013.

A5: Architecture Change

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A5L: Language Spelling, Wording, Grammar, Sentence Structure, Paragraph Structure, Flow, Voice	There are no errors that impair the flow of communication. (Perfect with < 2 errors)	Occasional errors that have only minor impact on the flow of communication. (A few minor errors)	Frequent errors that impede the flow of communication. (A few more serious errors)	Errors are serious and numerous. Reader must stop and reread and many struggle to discern the authors meaning. (Multiple, serious errors)
A5M: Motivations Motivations, Alternatives, Design Decision Rationales, Own Assumptions	Choices made are well motivated. Many alternatives are discussed. Own Assumptions are clearly discussed.	Choices made are well motivated. Some alternatives are discussed. Own Assumptions are listed.	Choices are partly motivated. Not many alternatives are discussed. Some own Assumptions are listed.	Choices are not motivated. No alternatives discussed. Own Assumptions are not mentioned.
A5R: Revisit Assignment 3 The degree to which feedback on Assignment 3 has been taken care of. *Note:* This is not included in the grade for Assignment 5, but is used to adjust the grade on assignment 3.	All issues raised have been adequately taken care of and the changes are clearly documented.	Most issues raised have been adequately taken care of and the changes are clearly documented, but with some exceptions.	Some issues raised have been partially taken care of and the changes are documented.	There are critical issues that have not been adequately taken care of. Changes are not properly documented.
A5IA: Impact Analysis Ability to analyse the impact of the given changes on factors, issue cards and strategies.	All factors, issues, and strategies affected by the change request are properly identified. The impact of the change is traced in the different architectural views. Suggested changes to factors, issues and strategies are relevant and accurate. Alternatively, no changes were necessary and this is clearly motivated.	Most factors, issues, and strategies affected by the change request are properly identified. The impact of the change is mostly traced in the different architectural views. Suggested changes to factors, issues and strategies are relevant and accurate.	Some factors, issues, and strategies affected by the change request are identified, including a few that in fact should not be affected. The impact of the change is somewhat traced in the different architectural views.	Factors, issues, and strategies are incorrectly identified as being affected/not affected by the change request. The impact of the change is not traced in the different architectural views.

— Rubric continued on next page —

PTO

A5: Architecture Change

Student(s)/Work:.....
Reviewed by:.....

Criteria	4 – Superior Command	3 – Good Control	2 – Fair/Some Control	1 – Minimal or No Control
A5AC: Architecture Change Ability to translate changed factors, issues, and strategies to changes in the conceptual, module, and execution views	Using and updating only the already existing traceability information, the views are clearly modified according to the changed factors, issues, and strategies. Alternatively, no changes were necessary.	With a few exceptions, the views are clearly modified according to the changed factors, issues, and strategies using and updating only the already existing traceability information.	The views are modified according to the changed factors, issues, and strategies.	The views are not adequately modified according to the changed factors, issues, and strategies.
A5SE: Self-Evaluation of Architecture	The choice of evaluation method and the reasons for rejecting other methods is well described and motivated. The chosen evaluation method is suitable for the goal of the evaluation. The evaluation is thorough and relevant issues are highlighted.	The chosen and rejected methods are described, choice is motivated. The chosen evaluation method is suitable for the goal of the evaluation. The evaluation lacks in thoroughness but some relevant issues are highlighted.	Other methods are mentioned. It is unclear whether the chosen evaluation method is suitable for the goal of the evaluation since it is not motivated. The evaluation lacks in thoroughness and only a few relevant issues are highlighted.	Other methods are not mentioned. The chosen evaluation method is not suitable for the goal of the evaluation. The evaluation is shallow and no relevant issues are highlighted.
A5AT: Architecture Transformation Changes done to the architecture as a result of evaluations.	Findings from the evaluation are discussed. Different solutions/transformations to the issues found are discussed. The selected transformations clearly solve the problems in an efficient way.	Findings from the evaluation are discussed. The selected transformations solve the problems.	Findings from the evaluation are summarised. The selected transformations may solve the problems.	The proposed transformations will not solve the problems OR no transformations proposed, based on a shallow evaluation.

Rubric created June 25, 2013.