

## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
1	jUCMNav's Web site shall include training material (exercises and solutions) for creating and analyzing URN models	23
2	jUCMNav shall include help for all its wizards	22
3	Showing GRL conflict resolutions and other decisions in the Problems view	20
4	Extracting a stub with a plug-in from a selection of UCM elements (refactoring)	19
5	jUCMNav's documentation shall cover GRL strategy usage	19
6	Exporting UCM scenarios to XML	18
7	Reorder the GRL diagrams/UCM maps (in the Outline and in the multipage editor)	18
8	Code completion for UCM responsibility/condition code editor	18
9	jUCMNav's Web site shall include examples (GRL with strategies, UCM with scenarios, models integrating GRL and UCM)	18
10	Exporting UCM models to UML activity diagrams	17
11	Exporting UCM models to UML use case diagrams	17
12	UML class diagrams for describing domain models	17
13	Merging URN models	17
14	UCM scenario/map flattening (expand stubs)	17
15	Displaying the result of the traversal of multiple scenarios	17
16	Copying/pasting part of UCM diagrams (images) to external tools such as Word without using the export wizard.	17
17	jUCMNav's documentation shall cover GRL model editing	17
18	Coverage analysis of multiple scenarios	16
19	Exporting URN reports to one flat HTML file (instead of current multi-file, hierarchical HTML documents)	16

Usage: GRL

Rank	Requirements	Values
1	The automatic deletion of unused UCM components and responsibilities	28
2	A hierarchical navigation view (where are we in the tree of maps/submaps)	28
3	Movable labels for GRL satisfaction labels	27
4	Semantic variations for UCM traversal (AND-joins, timers, waiting places, ...)	26
5	Movable labels for GRL contribution labels	26
6	Exporting UCM scenarios to DOORS (in DXL)	24
7	Automated combination and execution of each scenario in group A with each scenario in group B (or potentially, each scenario in the model with all other scenarios)	24
8	Exporting UCM scenarios to Message Sequence Charts	24
9	Exporting URN reports in MS Word (e.g. RTF)	24
10	jUCMNav shall include help for all its wizards	24
11	jUCMNav's Web site shall include examples (GRL with strategies, UCM with scenarios, models integrating GRL and UCM)	23
12	Multi-line labels in UCM responsibilities and components	23
13	jUCMNav's Web site shall include training material (exercises and solutions) for creating and analyzing URN models	23
14	Movable labels for UCM stub IN/OUT segments	23
15	Local variables for components in scenario definitions	23
16	Distinguishing UCM plug-in maps that are the same instance from those that are different instances	23
17	The combined deletion of definition and of all references of a UCM component, UCM responsibility, GRL actor, GRL intentional element	23

Usage: BOTH

Rank	Requirements	Values
1	Copying/pasting part of UCM diagrams across diagrams in the same model	94
2	Copying/pasting part of GRL diagrams across diagrams in the same model	94
3	Copying/pasting part of UCM diagrams across models	89
4	Exporting UCM scenarios to UML sequence diagrams	85
5	A hierarchical navigation view (where are we in the tree of maps/submaps)	84
6	GRL numerical contributions (beyond current help, make, hurt ...)	82
7	Reference to "parent" component in UCM plug-ins	81
8	User-defined links between GRL and UCM elements	81
9	Exporting UCM models to UML use case diagrams	80
10	Saving URN models to metamodel-independent XML-based file format	79
11	Loading URN models from metamodel-independent XML-based file format	79
12	Copying/pasting part of GRL diagrams across models	79
13	Copying/pasting part of GRL diagrams (images) to external tools such as Word without using the export wizard.	79
14	Copying/pasting part of UCM diagrams (images) to external tools such as Word without using the export wizard.	78
15	Exporting UCM models to UML activity diagrams	77
16	Usable auto-layout of GRL diagrams	77
17	Collapsing GRL actors and their content	76
18	Exporting URN model information to HTML (in addition of images)	76
19	Movable labels for GRL contribution labels	76
20	GRL strategies integrated with UCM scenario definitions	76
21	Usable auto-layout of UCM diagrams	76

## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
20	Exporting URN reports in PS/PDF	16
21	Aspect-oriented concepts and notation for UCM	16
22	Responsibility to stub transformation in UCM diagrams	16
23	Multi-line labels in UCM responsibilities and components	16
24	Collapsing UCM components and their content	16
25	Copying/pasting part of GRL diagrams (images) to external tools such as Word without using the export wizard.	16
26	Exporting UCM models to BPMN (Business Process Modeling Notation)	15
27	Exporting UCM models to BPEL (Business Process Execution Language)	15
28	Exporting UCM models to TTCN-3 test cases	15
29	The application of UCM reengineering patterns	15
30	The selectable visualization of GRL graphical and textual contribution/satisfaction labels globally	15
31	Importing GRL models from the OpenOME tool (OME uses the same file format)	15
32	Time concept in URN	15
33	Exporting UCM scenarios to DOORS (in DXL)	15
34	Indicating order of plug-in traversal where one or more plug-ins of a stub are traversed multiple times during the execution of one scenario	15
35	Collapsing GRL actors and their content	15
36	Usable auto-layout of GRL diagrams	15
37	Usable auto-layout of UCM diagrams	15
38	Movable labels for UCM stub IN/OUT segments	15
39	Loading UCM models from old UCMNav files	15
40	The generalization and refactoring of the model	14

Usage: GRL

Rank	Requirements	Values
18	Copying/pasting part of GRL diagrams across diagrams in the same model	22
19	Indicating order of plug-in traversal where one or more plug-ins of a stub are traversed multiple times during the execution of one scenario	22
20	Adding labels (yellow triangle) to GRL elements when URN links are defined	22
21	Local variables for plug-ins in scenario definitions	22
22	Collapsing GRL actors and their content	22
23	Copying/pasting part of UCM diagrams across diagrams in the same model	21
24	A central repository with locking mechanism for concurrent development of URN models	21
25	Exporting UCM scenarios to UML sequence diagrams	21
26	UCM component parameterization in stubs/plug-ins	21
27	Collapsing UCM components and their content	21
28	GRL numerical contributions (beyond current help, make, hurt ...)	21
29	Exporting UCM scenarios to XML	21
30	Aspect-oriented concepts and notation for UCM	21
31	Aspect-oriented concepts and notation for GRL	21
32	Closable panels/tabs for URN models with a large number of diagrams	20
33	Interactive selection (by user) of alternatives in non-deterministic locations when executing a UCM scenario	20
34	Exporting UCM models to UML use case diagrams	20
35	GRL strategies integrated with UCM scenario definitions	20
36	Groups of stubs which share the same plug-in instance and optional merging of plug-in bindings for those stubs	20

Usage: BOTH

Rank	Requirements	Values
22	Meta-information (tagged values) attached to URN elements	75
23	Exporting URN images in SVG format (Scalable Vector Graphics)	75
24	jUCMNav's Web site shall include examples (GRL with strategies, UCM with scenarios, models integrating GRL and UCM)	75
25	UCM exception mechanism (definitions and handling)	74
26	Extracting a stub with a plug-in from a selection of UCM elements (refactoring)	74
27	jUCMNav's documentation shall cover GRL strategy usage	72
28	The duplication of UCM diagrams	72
29	The duplication of GRL diagrams	72
30	Exporting UCM scenarios to XML	71
31	A component tree view (showing the containment relationships in components)	71
32	Exporting UCM scenarios to Message Sequence Charts	71
33	Collapsing UCM components and their content	70
34	Visual user-defined comments (post notes) for UCM diagrams	70
35	Multi-line labels in UCM responsibilities and components	70
36	Cropping images to eliminate surrounding white space during export	70
37	Exporting URN diagrams in PS/PDF	69
38	Highlighting of start/end points and in/out-paths when moving from stub to plug-in map and back	69
39	The application of UCM reengineering patterns	69
40	jUCMNav's documentation shall cover GRL model editing	68
41	Coverage analysis of multiple scenarios	68
42	Exporting URN reports to one	67

## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
	import API	
41	Exporting URN images in SVG format (Scalable Vector Graphics)	14
42	Exporting URN diagrams in PS/PDF	14
43	Importing UCM models from .NET code	14
44	Meta-information (tagged values) attached to URN elements	14
45	Performance annotations	14
46	Exporting GRL strategies to HTML	14
47	Local variables for plug-ins in scenario definitions	14
48	Local variables for components in scenario definitions	14
49	Loading URN models from metamodel-independent XML-based file format	14
50	Saving URN models to metamodel-independent XML-based file format	14
51	UCM component stacks	14
52	User-defined links between GRL and UCM elements	14
53	Aspect-oriented concepts and notation for GRL	14
54	UCM dynamic components (slots) and dynamic responsibilities	14
55	Collapse/expand all in the Outline view	14
56	Distinguishing UCM plug-in maps that are the same instance from those that are different instances	14
57	The inclusion of a textual use case editor	14
58	A hierarchical navigation view (where are we in the tree of maps/submaps)	14
59	Movable labels for GRL contribution labels	14
60	Movable labels for GRL satisfaction labels	14
61	Importing UCM models from ASP.NET code	13
62	GRL strategies integrated with UCM scenario definitions	13

Usage: GRL

Rank	Requirements	Values
37	User-defined links between GRL and UCM elements	20
38	Importing UCM models from ASP.NET code	20
39	GRL dependencies between actors - expanding/hiding actor details	19
40	Reference to "parent" component in UCM plug-ins	19
41	Copying/pasting part of UCM diagrams across models	19
42	Exporting UCM models to UML activity diagrams	19
43	Optional rectangles around images during export	19
44	The inclusion of a textual use case editor	19
45	UCM stub references (separate from stub definition)	19
46	UCM component classes and instances	19
47	jUCMNav's documentation shall cover GRL model editing	19
48	UCM empty responsibilities	19
49	Meta-information (tagged values) attached to URN elements	19
50	UCM dynamic components (slots) and dynamic responsibilities	19
51	Exporting UCM models to BPMN (Business Process Modeling Notation)	19
52	Exporting UCM models to BPEL (Business Process Execution Language)	19
53	Displaying the result of the traversal of multiple scenarios	18
54	Exporting URN model information to HTML (in addition of images)	18
55	String data type for scenario definitions	18
56	Visual user-defined comments (post notes) for UCM diagrams	18
57	Exporting URN reports to one flat HTML file (instead of current multi-file, hierarchical HTML documents)	18
58	The selectable visualization of GRL graphical and textual	18

Usage: BOTH

Rank	Requirements	Values
	flat HTML file (instead of current multi-file, hierarchical HTML documents)	
43	The use of resizable fonts for URN models	67
44	Closable panels/tabs for URN models with a large number of diagrams	67
45	Exporting GRL strategies to HTML	67
46	Showing GRL conflict resolutions and other decisions in the Problems view	67
47	UCM events on start points, waiting places, and timers	67
48	Movable labels for GRL satisfaction labels	66
49	UCM scenario/map flattening (expand stubs)	66
50	Time concept in URN	66
51	Reorder the GRL diagrams/UCM maps (in the Outline and in the multipage editor)	66
52	UCM component classes and instances	65
53	Centered labels in GRL intentional elements	65
54	Optional rectangles around images during export	65
55	Exporting URN reports in MS Word (e.g. RTF)	65
56	Semantic variations for UCM traversal (AND-joins, timers, waiting places, ...)	65
57	Indicating order of plug-in traversal where one or more plug-ins of a stub are traversed multiple times during the execution of one scenario	64
58	Viewing only the result of a UCM scenario traversal	63
59	Distinguishing UCM plug-in maps that are the same instance from those that are different instances	63
60	Displaying the result of the traversal of multiple scenarios	63
61	Exporting URN reports in PS/PDF	63
62	Adding labels (yellow triangle) to GRL elements when URN	63

## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
63	Closable panels/tabs for URN models with a large number of diagrams	13
64	UCM exception mechanism (definitions and handling)	13
65	UCM stub references (separate from stub definition)	13
66	Exporting UCM scenarios to UML sequence diagrams	13
67	Arrow to empty-point transformation in UCM diagrams	13
68	Interactive selection (by user) of alternatives in non-deterministic locations when executing a UCM scenario	13
69	Adding "Negate all others" (else) to conditions in UCM OR-forks and stubs	13
70	UCM events on start points, waiting places, and timers	12
71	URN hyperlinks (to/from URLs)	12
72	Taking the direction of the UCM path into account when adding a branch to a stub or a fork	12
73	Copying/pasting part of UCM diagrams across diagrams in the same model	12
74	Copying/pasting part of GRL diagrams across diagrams in the same model	12
75	Copying/pasting part of UCM diagrams across models	12
76	Copying/pasting part of GRL diagrams across models	12
77	Links to an Architecture Description Language (ADL)	11
78	Diff of URN models (beyond Eclipse's XML diff)	11
79	String data type for scenatio definitions	11
80	Reference to "parent" component in UCM plug-ins	11
81	Viewing only the result of a UCM scenario traversal	11
82	The duplication of GRL diagrams	11
83	The duplication of UCM diagrams	11
84	Definition of root map for a	10

Usage: GRL

Rank	Requirements	Values
	contribution/satisfaction labels globally	
59	Performance annotations	18
60	Reorder the GRL diagrams/UCM maps (in the Outline and in the multipage editor)	17
61	UCM exception mechanism (definitions and handling)	17
62	Showing GRL conflict resolutions and other decisions in the Problems view	17
63	Links to an Architecture Description Language (ADL)	17
64	The duplication of GRL diagrams	17
65	Exporting UCM to Fit Nesse test goals	17
66	The application of UCM reengineering patterns	17
67	Collapse/expand all in the Outline view	17
68	Exporting UCM models to TTCN-3 test cases	17
69	Coverage analysis of multiple scenarios	16
70	Exporting URN diagrams in PS/PDF	16
71	Time concept in URN	16
72	Exporting URN reports in PS/PDF	16
73	jUCMNav's documentation shall cover GRL strategy usage	16
74	Exporting UCM models to CSM (Core Scenario Model)	16
75	UCM component stacks	15
76	Viewing only the result of a UCM scenario traversal	15
77	URN hyperlinks (to/from URLs)	15
78	Cropping images to eliminate surrounding white space during export	14
79	Definition of root map for a feature/use case plus automatic listing of all plug-in maps reached from the defined root map	14
80	The automatic identification of top-level UCM maps	14

Usage: BOTH

Rank	Requirements	Values
	links are defined	
63	Groups of stubs which share the same plug-in instance and optional merging of plug-in bindings for those stubs	63
64	Merging URN models	62
65	The inclusion of a textual use case editor	62
66	GRL dependencies between actors - expanding/hiding actor details	62
67	Loading UCM models from old UCMNav files	62
68	Exporting UCM scenarios to DOORS (in DXL)	61
69	Movable labels for UCM stub IN/OUT segments	61
70	Performance annotations	61
71	Exporting UCM models to BPEL (Business Process Execution Language)	59
72	Local variables for components in scenario definitions	58
73	Definition of root map for a feature/use case plus automatic listing of all plug-in maps reached from the defined root map	58
74	Exporting UCM models to BPMN (Business Process Modeling Notation)	58
75	Collapse/expand all in the Outline view	57
76	The selectable visualization of GRL graphical and textual contribution/satisfaction labels globally	57
77	Adding "Negate all others" (else) to conditions in UCM OR-forks and stubs	57
78	UCM stub references (separate from stub definition)	57
79	UCM component parameterization in stubs/plug-ins	55
80	The automatic identification of top-level UCM maps	55
81	jUCMNav's Web site shall include training material (exercises and solutions) for creating and analyzing URN models	55

## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
	feature/use case plus automatic listing of all plug-in maps reached from the defined root map	
85	A component tree view (showing the containment relationships in components)	10
86	Exporting UCM to Fit Nesse test goals	10
87	Exporting UCM models to CSM (Core Scenario Model)	10
88	Importing UCM models from the Compact Trace Format (CTF)	10
89	UCM empty responsibilities	10
90	Changing group for a strategy/scenario	9
91	Sorting of diagrams in the Strategies/Scenarios view	9
92	Sorting of diagrams in the Outline view	9
93	The use of resizable fonts for URN models	9
94	A central repository with locking mechanism for concurrent development of URN models	9
95	Cropping images to eliminate surrounding white space during export	9
96	Semantic variations for UCM traversal (AND-joins, timers, waiting places, ...)	8
97	Centered labels in GRL intentional elements	8
98	Visual user-defined comments (post notes) for UCM diagrams	8
99	Exporting URN model information to HTML (in addition of images)	8
100	GRL dependencies between actors - expanding/hiding actor details	8
101	GRL numerical contributions (beyond current help, make, hurt ...)	8
102	Optional rectangles around images during export	8
103	Exporting URN reports in MS Word (e.g. RTF)	8
104	Highlighting of start/end points and in/out-paths when moving from stub to plug-in	7

Usage: GRL

Rank	Requirements	Values
81	Highlighting of start/end points and in/out-paths when moving from stub to plug-in map and back	14
82	UCM events on start points, waiting places, and timers	14
83	UML class diagrams for describing domain models	14
84	Copying/pasting part of GRL diagrams (images) to external tools such as Word without using the export wizard.	14
85	The duplication of UCM diagrams	14
86	Saving URN models to metamodel-independent XML-based file format	14
87	Loading URN models from metamodel-independent XML-based file format	14
88	Sorting of diagrams in the Outline view	14
89	Sorting of diagrams in the Strategies/Scenarios view	14
90	Exporting GRL strategies to HTML	14
91	Adding "Negate all others" (else) to conditions in UCM OR-forks and stubs	13
92	The use of resizable fonts for URN models	13
93	Copying/pasting part of UCM diagrams (images) to external tools such as Word without using the export wizard.	13
94	Arrow to empty-point transformation in UCM diagrams	13
95	Importing UCM models from .NET code	13
96	A scripting language for batch execution and tool interworking	13
97	Exporting URN images in SVG format (Scalable Vector Graphics)	12
98	Importing UCM models from the Compact Trace Format (CTF)	12
99	Merging URN models	12
100	Code completion for UCM responsibility/condition code editor	11
101	Changing group for a	11

Usage: BOTH

Rank	Requirements	Values
82	Taking the direction of the UCM path into account when adding a branch to a stub or a fork	55
83	UCM component stacks	55
84	String data type for scenario definitions	53
85	Aspect-oriented concepts and notation for UCM	53
86	The combined deletion of definition and of all references of a UCM component, UCM responsibility, GRL actor, GRL intentional element	53
87	Local variables for plug-ins in scenario definitions	53
88	Diff of URN models (beyond Eclipse's XML diff)	53
89	UML class diagrams for describing domain models	52
90	Importing GRL models from the OpenOME tool (OME uses the same file format)	51
91	Aspect-oriented concepts and notation for GRL	51
92	Exporting UCM to Fit Nesse test goals	50
93	Responsibility to stub transformation in UCM diagrams	50
94	Automated combination and execution of each scenario in group A with each scenario in group B (or potentially, each scenario in the model with all other scenarios)	49
95	Interactive selection (by user) of alternatives in non-deterministic locations when executing a UCM scenario	49
96	Changing group for a strategy/scenario	49
97	The generalization and refactoring of the model import API	49
98	URN hyperlinks (to/from URLs)	48
99	Collapse/expand all in the Strategies/Scenarios view	48
100	UCM dynamic components (slots) and dynamic responsibilities	48
101	Sorting of diagrams in the	48



## Requirements ranking in the USAGE background

Usage: UCM

Rank	Requirements	Values
	map and back	
105	UCM component classes and instances	7
106	Exporting UCM scenarios to Message Sequence Charts	7
107	Automated combination and execution of each scenario in group A with each scenario in group B (or potentially, each scenario in the model with all other scenarios)	7
108	Collapse/expand all in the Strategies/Scenarios view	6
109	A scripting language for batch execution and tool interworking	6
110	Groups of stubs which share the same plug-in instance and optional merging of plug-in bindings for those stubs	5
111	The automatic identification of top-level UCM maps	4
112	Adding labels (yellow triangle) to GRL elements when URN links are defined	4
113	UCM component parameterization in stubs/plug-ins	4
114	The combined deletion of definition and of all references of a UCM component, UCM responsibility, GRL actor, GRL intentional element	4
115	The automatic deletion of unused UCM components and responsibilities	3

Usage: GRL

Rank	Requirements	Values
	strategy/scenario	
102	Centered labels in GRL intentional elements	11
103	A component tree view (showing the containment relationships in components)	10
104	Usable auto-layout of GRL diagrams	10
105	Copying/pasting part of GRL diagrams across models	9
106	Responsibility to stub transformation in UCM diagrams	9
107	UCM scenario/map flattening (expand stubs)	9
108	Diff of URN models (beyond Eclipse's XML diff)	9
109	Collapse/expand all in the Strategies/Scenarios view	9
110	Loading UCM models from old UCMNav files	9
111	Importing GRL models from the OpenOME tool (OME uses the same file format)	9
112	Taking the direction of the UCM path into account when adding a branch to a stub or a fork	6
113	Extracting a stub with a plug-in from a selection of UCM elements (refactoring)	6
114	The generalization and refactoring of the model import API	6
115	Usable auto-layout of UCM diagrams	2

Usage: BOTH

Rank	Requirements	Values
	Outline view	
102	Code completion for UCM responsibility/condition code editor	47
103	UCM empty responsibilities	47
104	A scripting language for batch execution and tool interworking	46
105	A central repository with locking mechanism for concurrent development of URN models	46
106	The automatic deletion of unused UCM components and responsibilities	45
107	Importing UCM models from .NET code	44
108	Importing UCM models from ASP.NET code	43
109	Arrow to empty-point transformation in UCM diagrams	41
110	Sorting of diagrams in the Strategies/Scenarios view	40
111	Exporting UCM models to TTCN-3 test cases	38
112	Exporting UCM models to CSM (Core Scenario Model)	38
113	Links to an Architecture Description Language (ADL)	37
114	jUCMNav shall include help for all its wizards	36
115	Importing UCM models from the Compact Trace Format (CTF)	27