Appendix E

Paper D: Themes and Sub-themes

The themes and subthemes are listed with strength given after each entry.

Themes

1. communication: 270
2. testing and trouble shooting: 266
3. processes: 237
4. technology: 166
5. artifacts: 121
6. organization: 91

Sub-Themes

1. collaboration between roles: 58
2. management of changes: 54
3. test environment: 54
4. test levels: 53
5. behavioral aspects: 47
6. feedback: 47
7. root cause analysis: 44
8. test execution: 44
9. development model: 43
10. reporting: 43
11. test reporting aspects: 41
12. automated testing: 40
13. traceability: 39
14. visual reporting: 39
15. automated reporting: 35
16. distance or distributed: 35
17. safety development: 34
18. test results database: 34
19. complexity: 33
20. coverage: 33

21. requirements: 32
22. add delete test case: 29
23. test design: 29
24. test selection: 29
25. misunderstandings: 27
26. reviews: 26
27. tool support: 26
28. test specifications: 25
29. decisions and decision support: 24
30. team structure: 24
31. internal communication: 22
32. simulation: 22
33. quality: 20
34. log files: 19
35. duration of test case: 18
36. planning: 18
37. late test: 17
38. specifications: 17
39. staffing aspects: 17
40. test early: 16
41. test framework: 16
42. manual testing: 15
43. testability: 15
44. regression testing: 14
45. risk analysis: 14
46. test results: 14
47. informal communication: 13
48. release process: 13
49. responsibility: 13
50. automated builds: 12
51. information overflow: 12
52. continuous integration: 11
53. exploratory testing: 11
54. impact analysis: 11
55. knowledge transfer: 11
56. reproducibility: 11
57. source code management: 10
58. test cases in areas: 10
59. test on target: 10
60. test status monitoring: 10
61. work environment: 10
62. hardware: 9
63. legacy considerations: 9
64. standards: 9
65. static code analysis: 9
66. level of formality: 8
67. test strategy: 8
68. value of testing: 8
69. waste of time: 8
70. interpret test results: 7

71. process change: 7
72. communication method: 6
73. informal testing: 6
74. test process: 6
75. debugging: 5
76. external communication: 5
77. manual reporting: 5
78. slow progress: 5
79. early project challenge: 4
80. hacker mentality: 4
81. informal processes: 4
82. lack of testing: 4
83. test application: 4
84. verbal communication: 4
85. external testing: 3
86. tests with known issues: 3