

Test Reporting for Impact

Information, Analysis, and Calls to Action



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Test Reporting for Impact

- Key test reporting concepts
- Test status reporting
- Test analysis reporting
- Best practices in test reporting



Key Test Reporting Concepts

- Testing itself has no value...but it produces potentially valuable information
- Test information must be communicated effectively to be valuable
- Common communication goals
 - Notify (“We have 24 bugs remaining to close”)
 - Enlighten (“See the time lost due to reopens”)
 - Influence (“We propose a bug triage meeting”)
- Test managers often report test status (regularly) and test analysis (as needed)

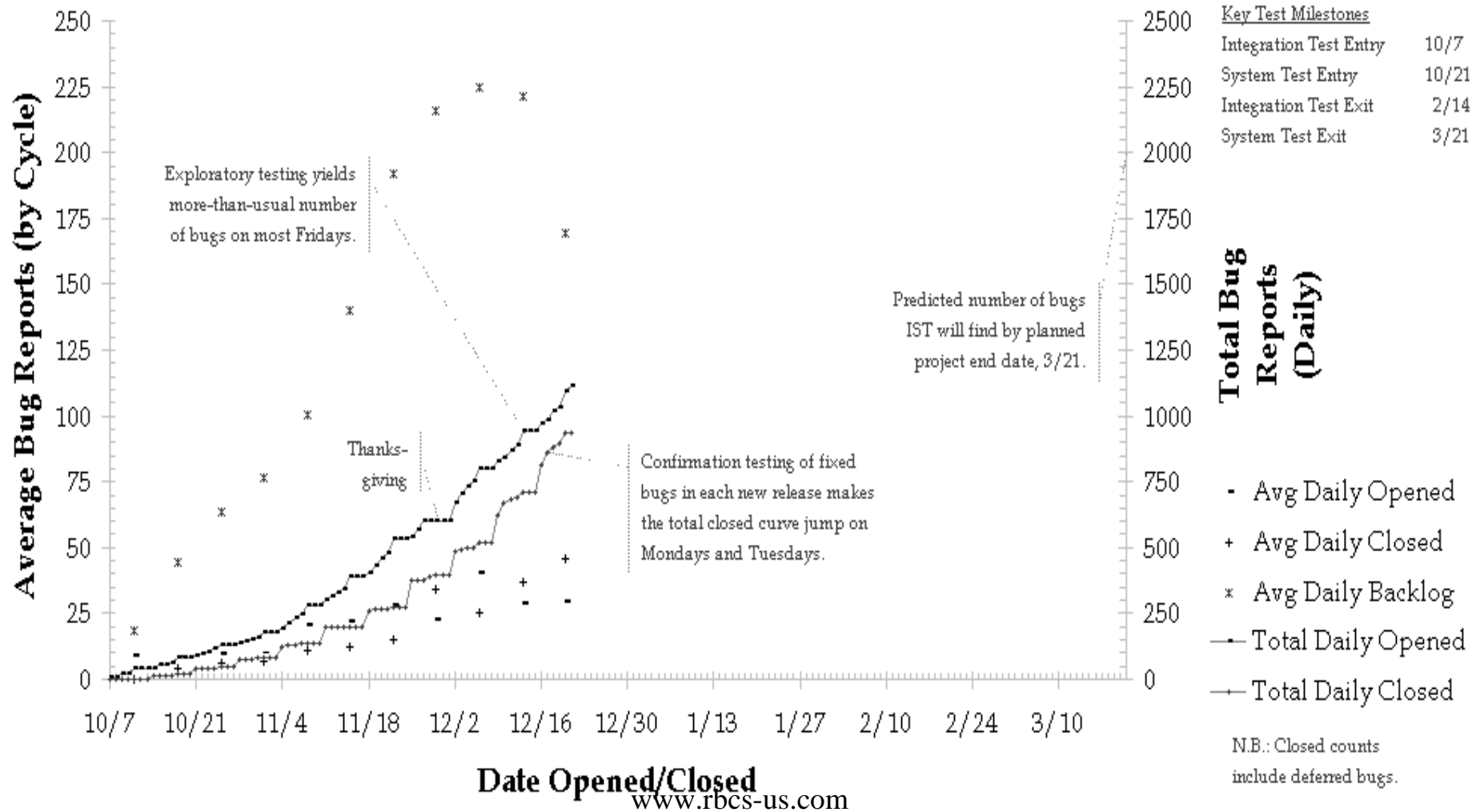


Test Status Reporting

- Typical topics to cover in a test status report
 - Current quality: often in terms of bugs
 - Test progress: often in terms of cases run
 - Test efficiency: often based on hours
 - Coverage: often against test basis
- Consistency is helpful, because the audience knows how to read the charts

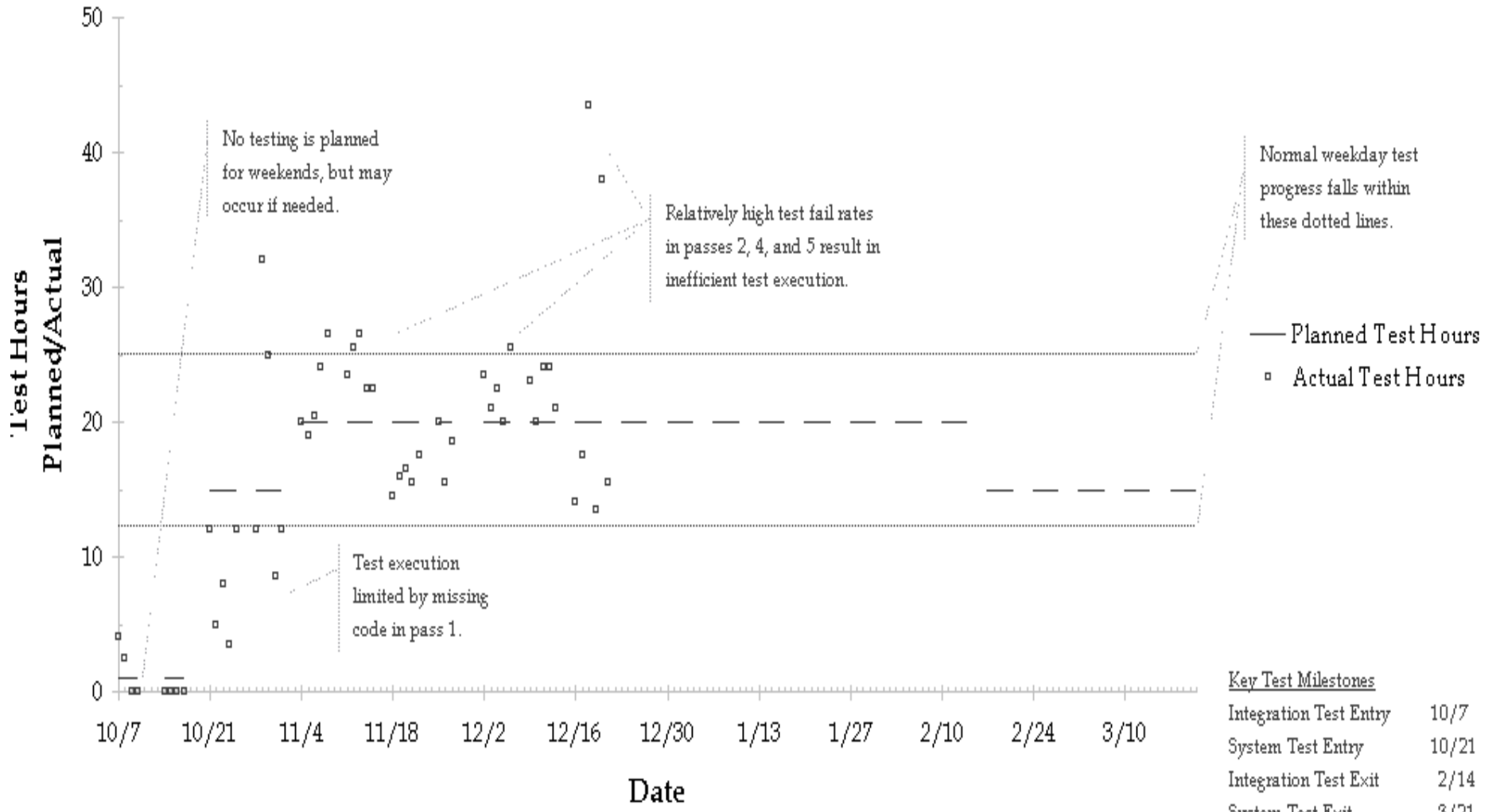


Sumatra Integration and System Test Execution Phases System Quality Problems Analysis



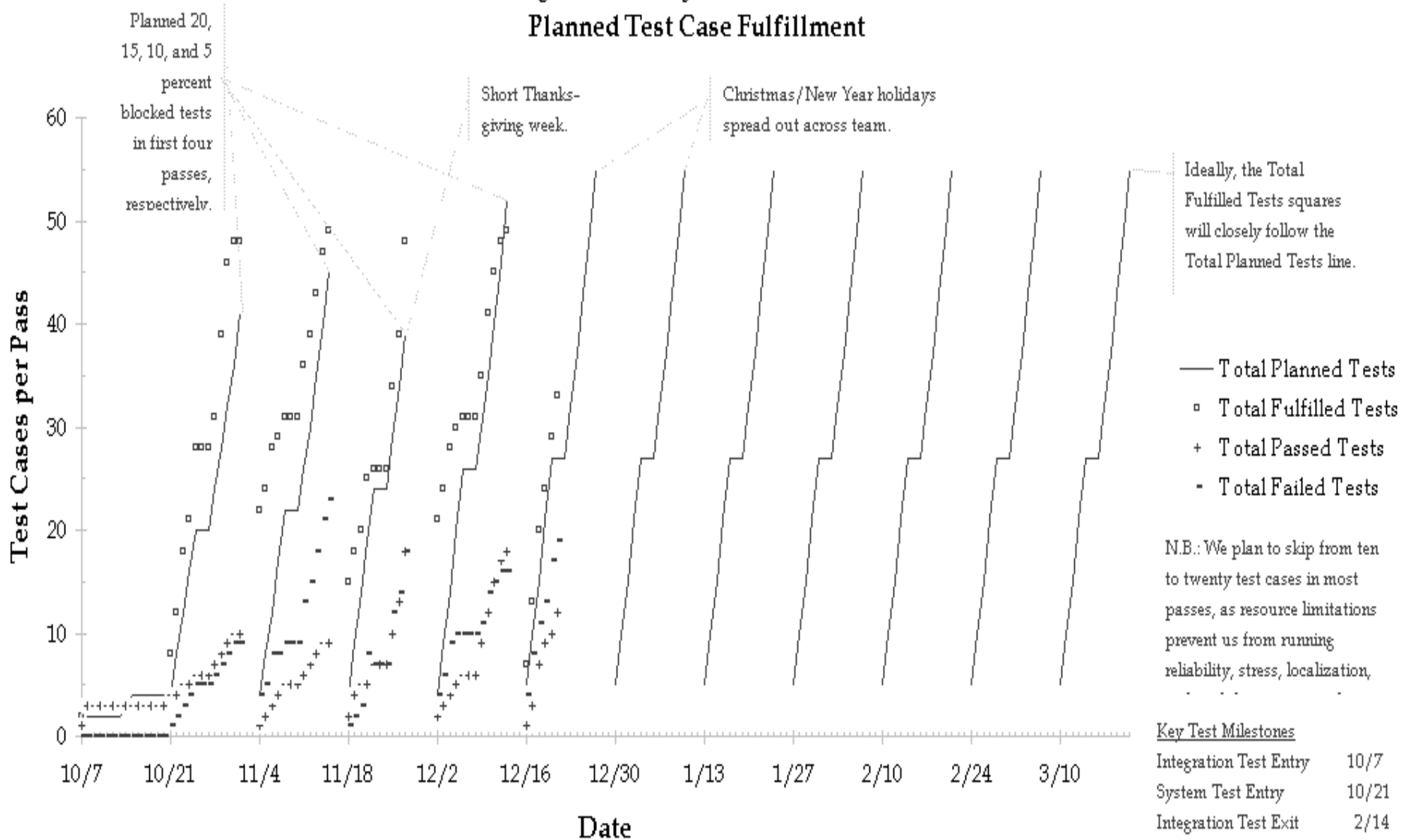


Sumatra Integration and System Test Execution Phases Test Progress



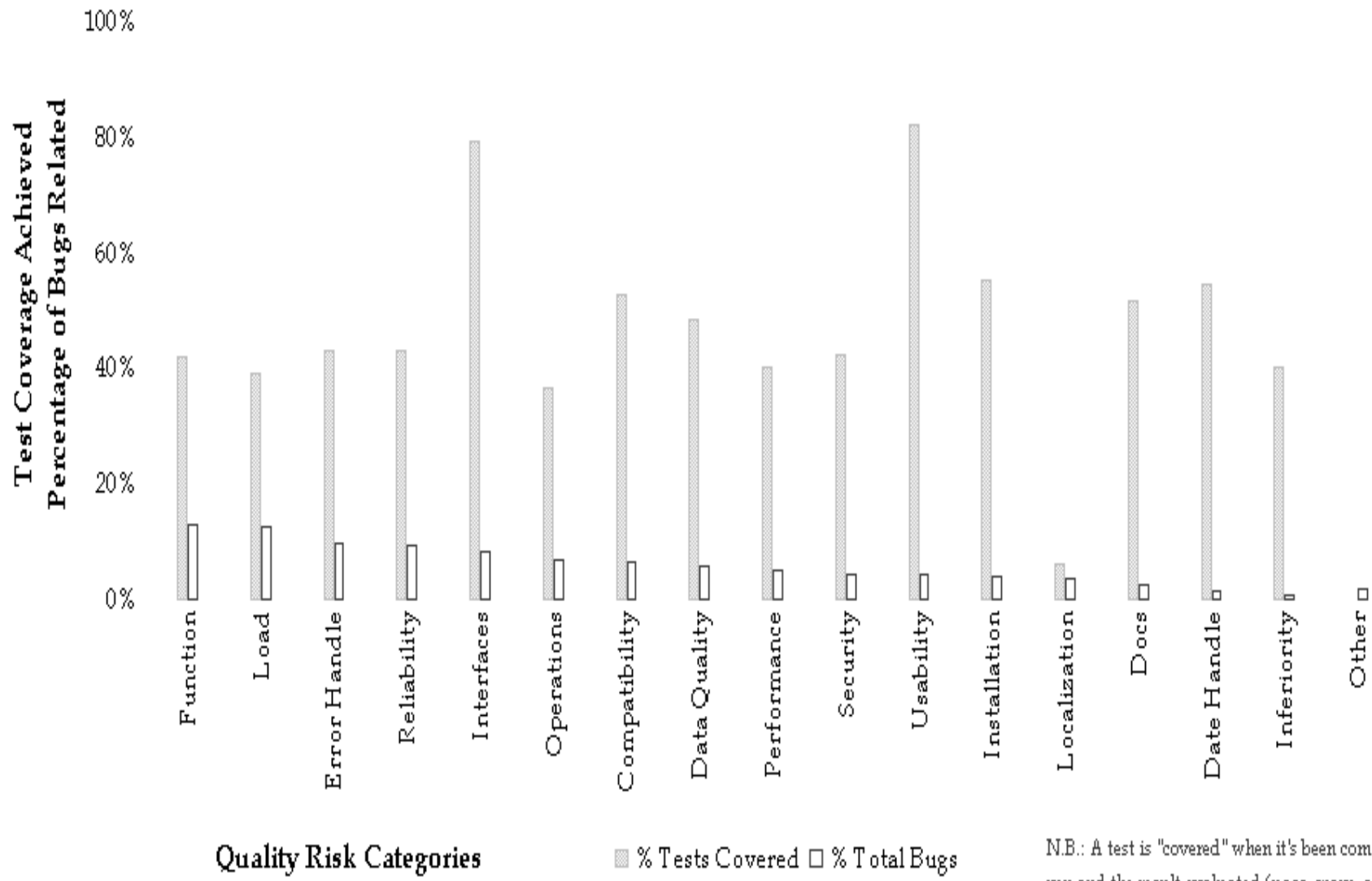


Sumatra Integration and System Test Execution Phases Planned Test Case Fulfillment





Sumatra Integration and System Test Execution Phases Quality Risks Bugs and Test Coverage



N.B.: A test is "covered" when it's been completely run and the result evaluated (pass, warn, or fail).



Coverage by Table

Risk Area	Bugs		Coverage		
	#	%	Plan	Actual	%
Perf/Load/Rel	304	27	3843	1512	39
Robust/Ops/Sec	234	21	1032	432	42
Func/Data/Dates	224	20	4744	2043	43
Use/UI/Locale	160	14	498	318	64
Interfaces	93	8	193	153	79
Compatibility	71	6	1787	939	53
Other	21	2	0	0	
	1107	100	12857	5703	44

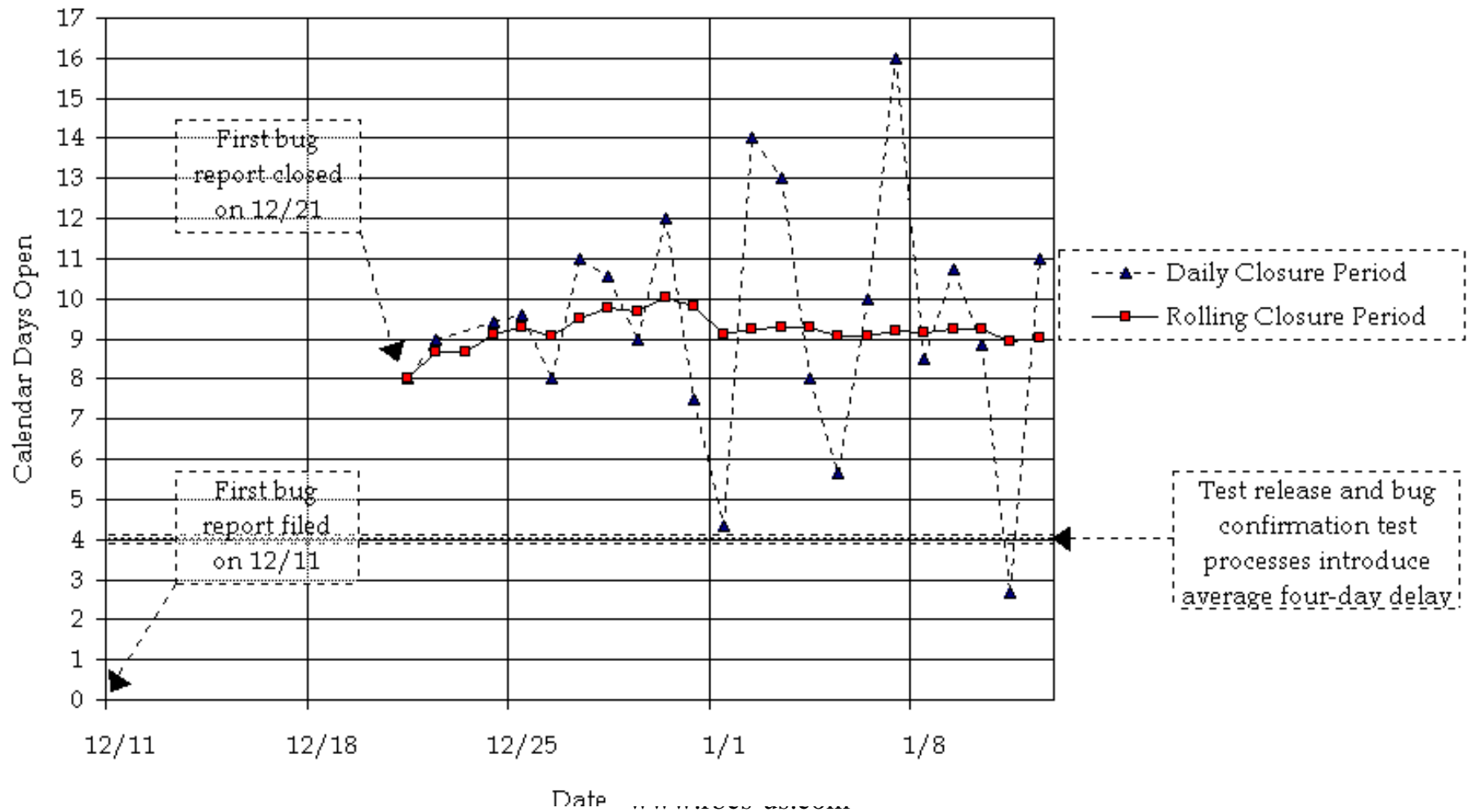


Explaining Variance from Plan

- If things are not going well, you might augment your report with test logs, causal analysis charts, other data
- Adding new information can lead to confusion
 - Explain these new charts meticulously
 - Try to anticipate questions and answer them in the chart
- Bad news provokes stronger reactions than good news!

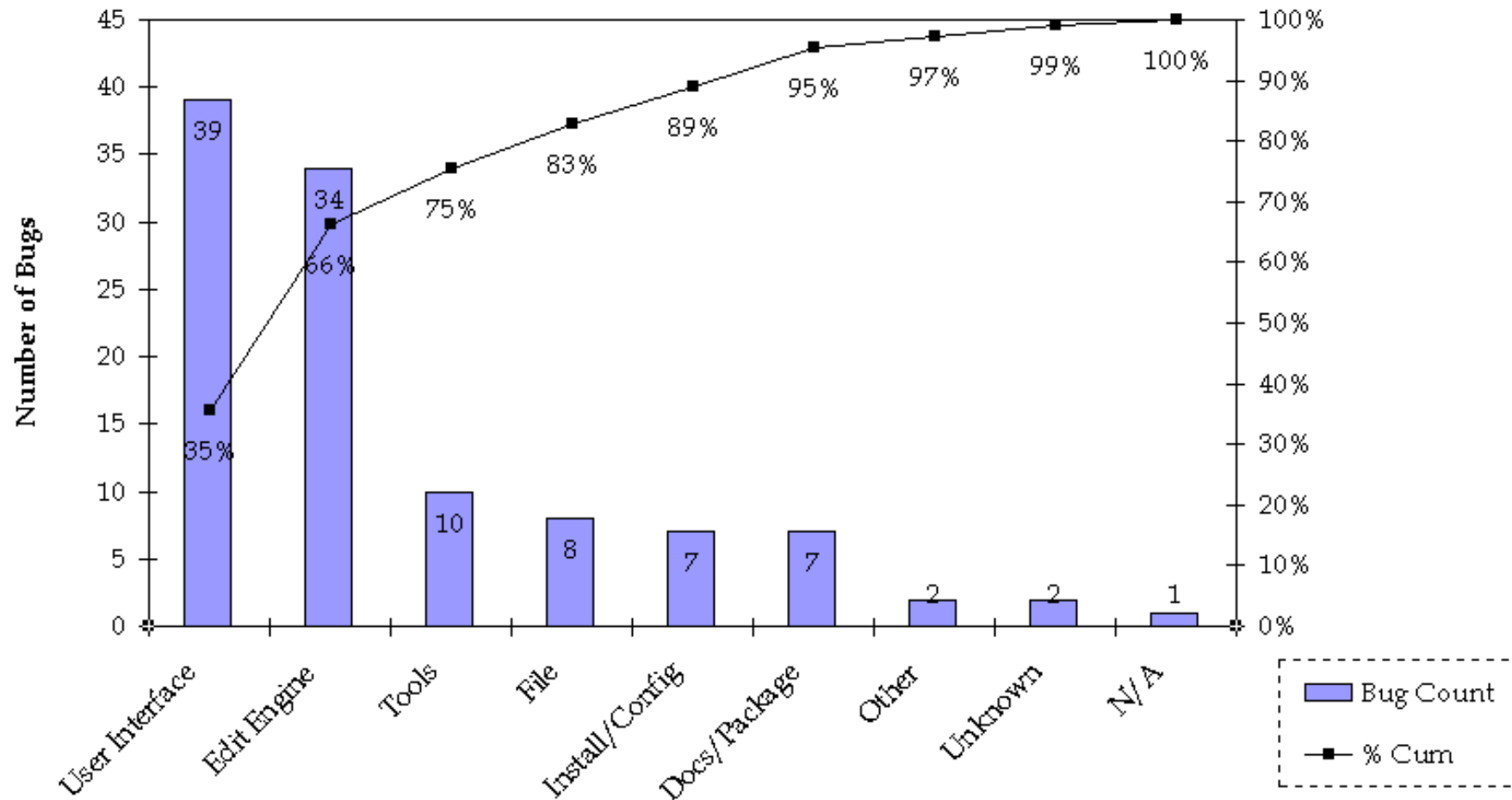


SpeedyWriter Bugs Daily and Rolling Closure Period





SpeedyWriter Bugs Subsystem Breakdown



Subsystem Most Affected by Bug



Control Charts

- Charts which are useful to control testing do not always make good status reporting charts
- Sometimes, the information density overwhelms and confuses viewers
- Lack of trend and causal information can misdirect and confuse, too
- These charts may be useful in exceptional situations

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W				
1	DataRocket System Test Case Summary																										
2				Pass One																							
3	Test			Status	Config	ID	RPN	By	Plan Date	Act Date	Plan Effort	Act Effort	Plan Dur	Act Dur	Comment	Roll Up Columns											
4	Owner	ID	Test Suite/Case	Status	Config	ID	RPN	By	Plan Date	Act Date	Plan Effort	Act Effort	Plan Dur	Act Dur	Comment	T	S	P	F	FV	Q	I	B				
5	System Cookers, Inc.																										
6	1.000		<i>Environmental Test</i>																								
7		1.001	Operating Thermal Profile	Pass	D			SC	7/13	7/14	4	4	72	72		1	0	1	0	#	0	0	0				
8		1.002	Operating Temp/Humid Cycle	Pass	D			SC	7/13	7/14	4	4	72	72		1	0	1	0	#	0	0	0				
9		1.003	Non-Operating Temp/Humid Cycl	Pass	D			SC	7/13	7/14	4	4	72	72		1	0	1	0	#	0	0	0				
10		1.004	Non-Operating Drop	Pass	D			SC	7/13	7/14	2	2	2	2		1	0	1	0	#	0	0	0				
11		1.005	Non-Operating Shock	Pass	D			SC	7/13	7/14	2	2	2	2		1	0	1	0	#	0	0	0				
12		1.006	Non-Operating Thermal Shock	Pass	D			SC	7/13	7/14	2	2	72	72		1	0	1	0	#	0	0	0				
13		1.007	Packaging Drop	Pass	D			SC	7/13	7/14	2	2	2	2		1	0	1	0	#	0	0	0				
14		1.008	Packaging Shock	Pass	D			SC	7/13	7/14	2	2	2	2		1	0	1	0	#	0	0	0				
15			Suite Summary						7/13	7/14	22	22	296	296		8	0	8	0	0	0	0	0				
16	Winged Bytes																										
17	LTW	2.000	<i>Load, Capacity and Volume</i>																								
18		2.001	CPU and Memory	Fail	A,B,C	009	2	LTW	7/10	7/6	4	6	6	7		1	0	0	1	1/2	0	0	0				
19						010	6													1/6							
20		2.002	FDD/Jaz/CD-ROM/DVD	Pass	A,B,C			LTW	7/10	7/6	4	4	4	4		1	0	1	0	#	0	0	0				
21		2.003	RAID	Pass	A,B,C			LTW	7/10	7/6	4	4	4	4		1	0	1	0	#	0	0	0				
22		2.004	Tape	Pass	A,B,C			LTW	7/10	7/7	4	4	4	4		1	0	1	0	#	0	0	0				
23		2.005	Network	Pass	A,B,C			LTW	7/10	7/7	4	4	4	4		1	0	1	0	#	0	0	0				
24		2.006	Modem Bank	Pass	A,B,C			LTW	7/10	7/8	4	4	4	4		1	0	1	0	#	0	0	0				
25		2.007	USB/Parallel/Serial	Pass	A,B,C			LTW	7/10	7/8	4	4	4	4		1	0	1	0	#	0	0	0				
26		2.008	All Subsystems	Pass	A,B,C			LTW	7/10	7/10	4	4	4	4		1	0	1	0	#	0	0	0				
27			Suite Summary						7/10	7/10	32	34	34	35		8	0	7	1	0.6667	0	0	0				
28																											
29	JC	3.000	<i>Basic Functionality</i>																								
30		3.001	Configure/Register NT	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
31		3.002	Configure/Register Solaris	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
32		3.003	Configure/Register Novell	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
33		3.004	FDD/Jaz/CD-ROM/DVD	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
34		3.005	RAID	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
35		3.006	Tape	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
36		3.007	Network-NT	Pass	A,B,C			JC	7/9	7/7	2	2	2	2		1	0	1	0	#	0	0	0				
37		3.008	Network-Novell	Pass	A,B,C			JC	7/9	7/9	2	1.5	2	1.5		1	0	1	0	#	0	0	0				
38		3.009	Network-PC-NFS	Pass	A,B,C			JC	7/9	7/9	2	1.5	2	1.5		1	0	1	0	#	0	0	0				
39		3.010	Modem Bank	Pass	A,B,C			JC	7/9	7/9	2	2.5	2	2.5		1	0	1	0	#	0	0	0				
40		3.011	USB/Parallel/Serial	Pass	A,B,C			JC	7/9	7/9	2	2.5	2	2.5		1	0	1	0	#	0	0	0				
41		3.012	UI (Video/Kbd/Mouse)	Pass	A,B,C			JC	7/9	7/10	2	1	2	1		1	0	1	0	#	0	0	0				
42			Suite Summary						7/9	7/10	18	17	18	17		12	0	12	0	0	0	0	0				
43																											
44	HL	4.000	<i>Standards</i>																								
45		4.001	Solaris Logo	Pass	A			HL	7/8	7/7	8	8	16	16		1	0	1	0	#	0	0	0				
46		4.002	Windows NT Logo	Pass	B			HL	7/8	7/5	8	8	16	16		1	0	1	0	#	0	0	0				
47		4.003	Novell Logo	Warn	C	005	25	HL	7/8	7/10	8	8	16	16		1	0	1	0	1/25	0	0	0				
48			Suite Summary						7/8	7/10	24	24	48	48		3	0	3	0	0.04	0	0	0				



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	DataRocket System Test Suite Summary														
2	Pass One														
3															
4		Total	Planned Tests Fulfilled				Weighted	Planned Tests Unfulfilled				Earned Value			
5	Suite	Cases	Count	Skip	Pass	Fail	Failure	Count	Queued	IP	Block	Plan Eff	Act Eff	% Effort	% Exec
6															
7	Environmental Test	8	8	0	8	0	0.00	0	0	0	0	22.00	22.00	100%	100%
8	Load, Capacity and Volume	8	8	0	7	1	0.67	0	0	0	0	32.00	34.00	106%	100%
9	Basic Functionality	12	12	0	12	0	0.00	0	0	0	0	18.00	17.00	94%	100%
10	Standards	3	3	0	3	0	0.04	0	0	0	0	24.00	24.00	100%	100%
11															
12	Total	31	31	0	30	1	0.71	0	0	0	0	96.00	97.00	101%	100%
13	By Percentage		100%	0%	97%	3%		0%	0%	0%	0%				

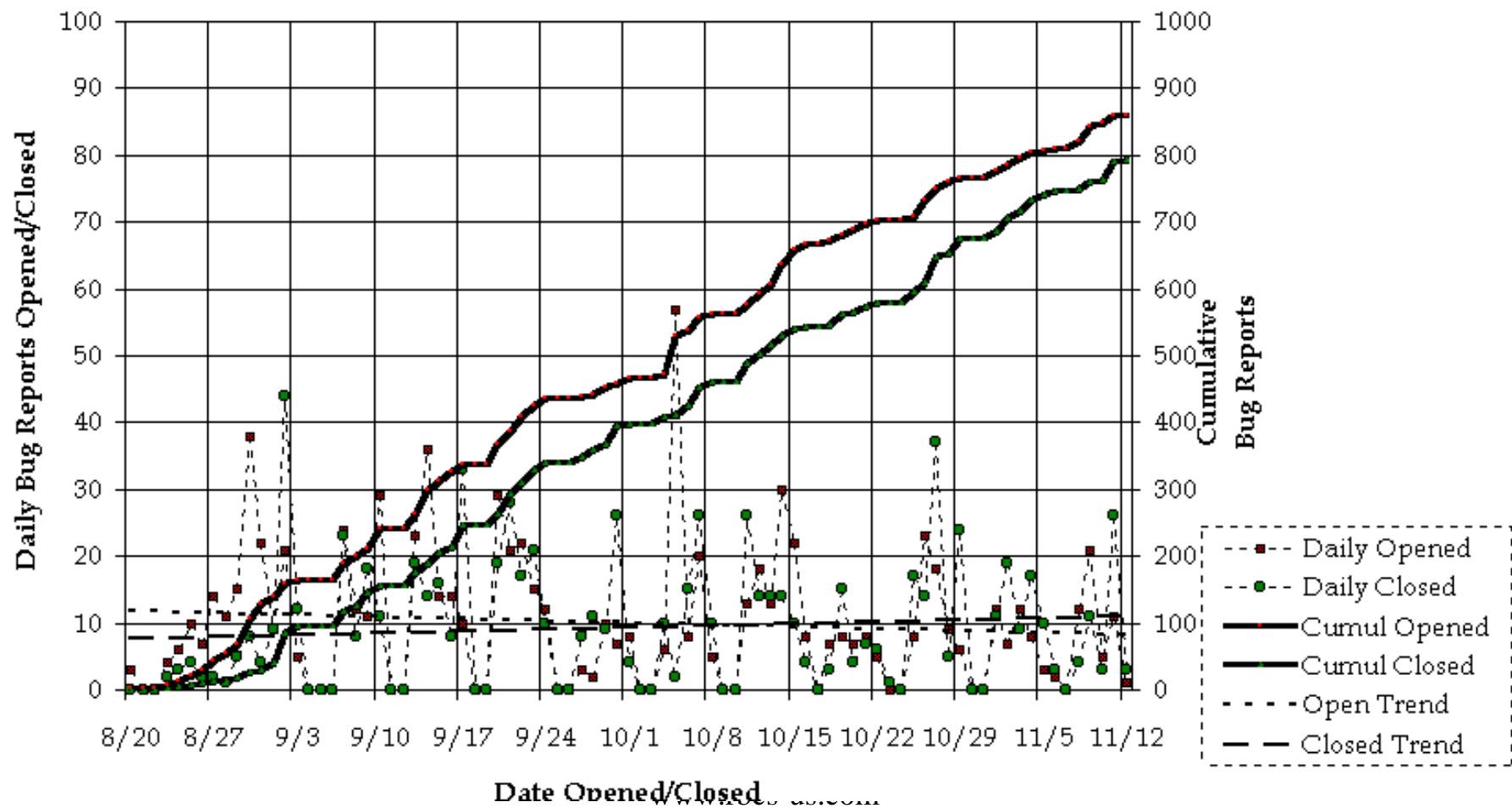


Test Analysis Reporting

- You can do analysis of the test results during the project or after
- Here is a retrospective analysis of a failed home equity loan processing system project
- Problems in testing include
 - Endless bug discovery
 - Massive waste in recurring bugs
 - Increasing closure period over time
- Unstable requirements, excessive regression, and too-frequent releases contributed to cancellation of the planned deployment

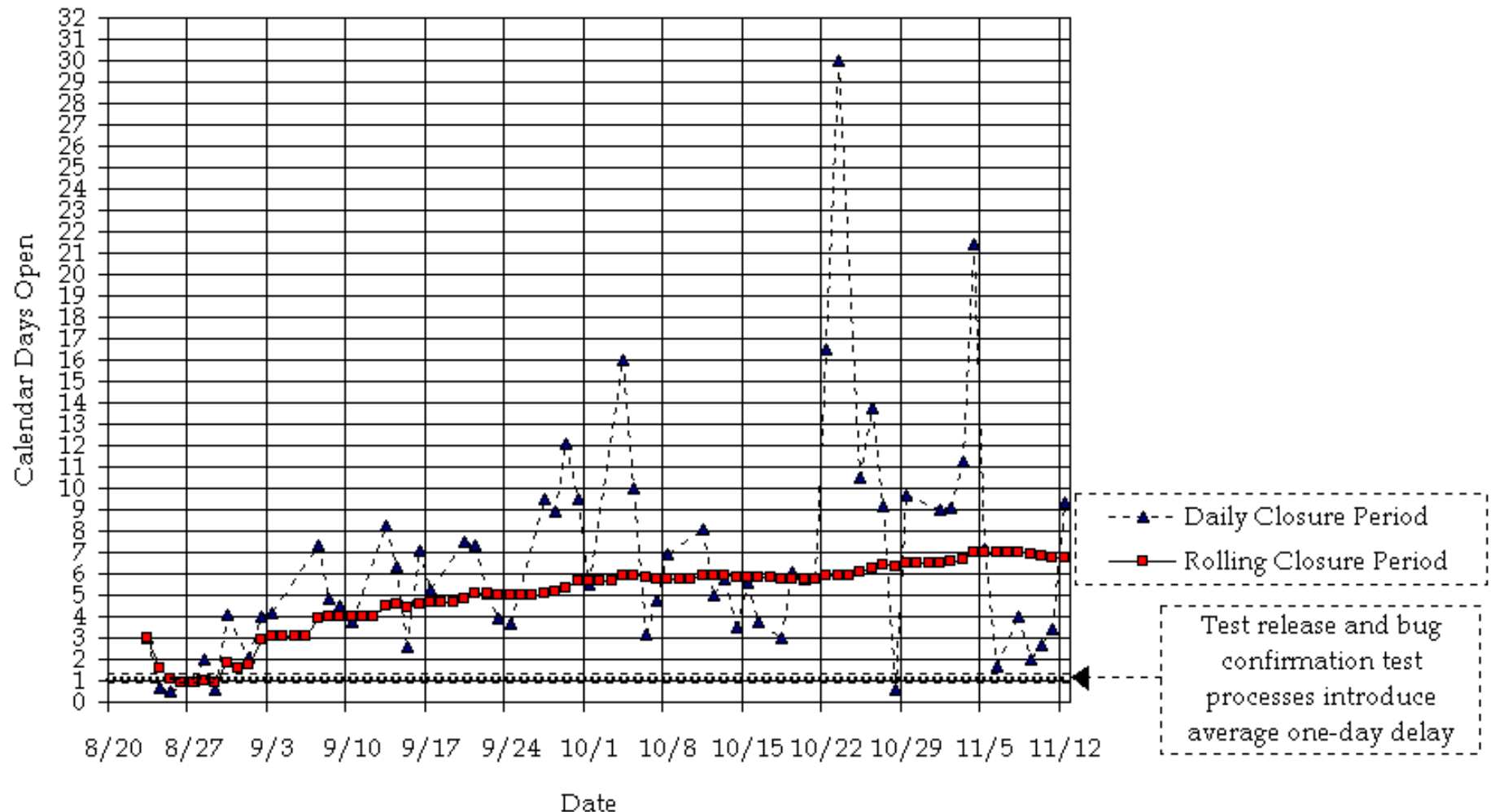


Case Study Home Equity Loan Application Bugs Product Quality Problems Analysis



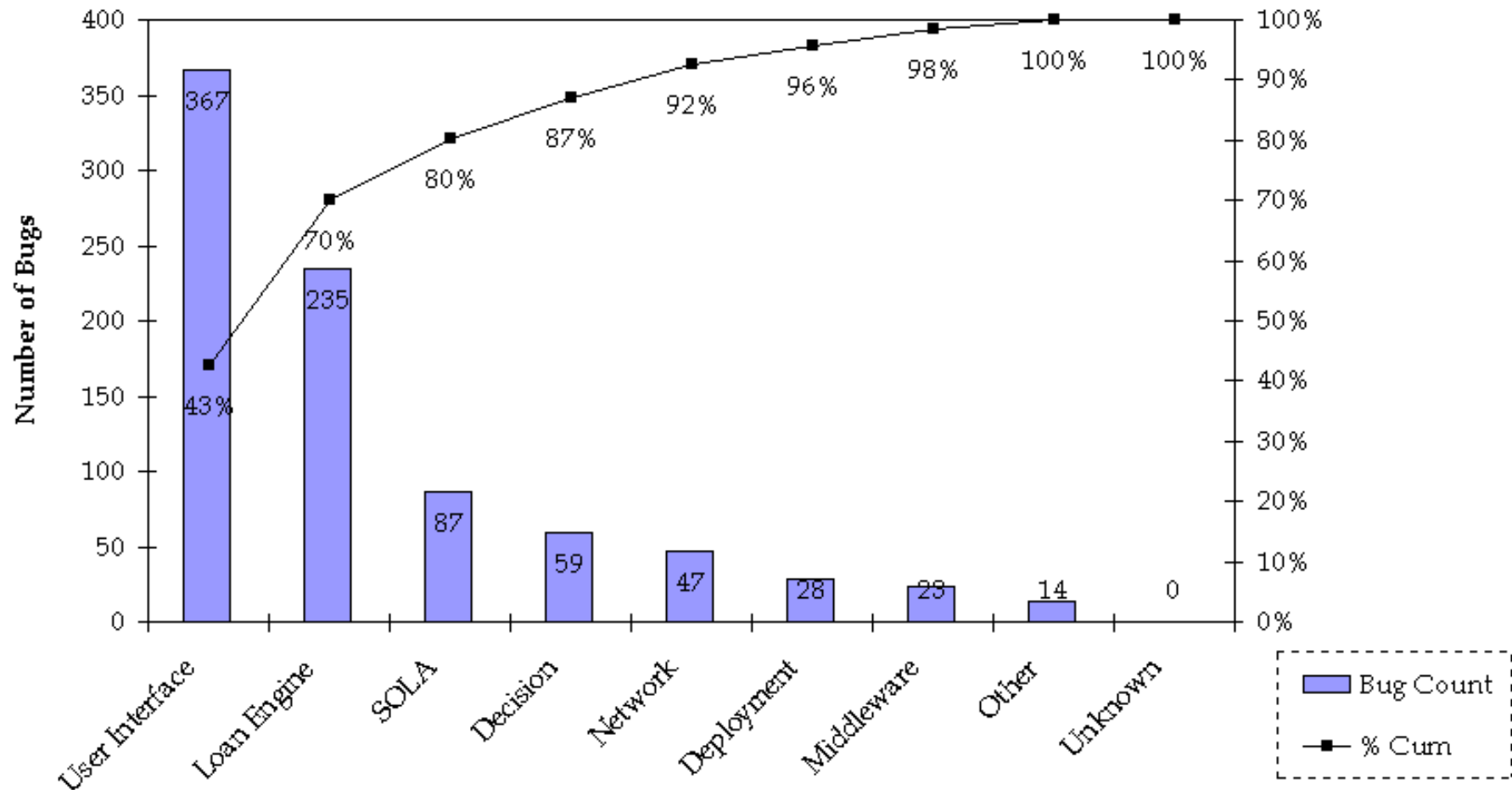


Case Study Home Equity Loan Application Bugs Daily and Rolling Closure Period





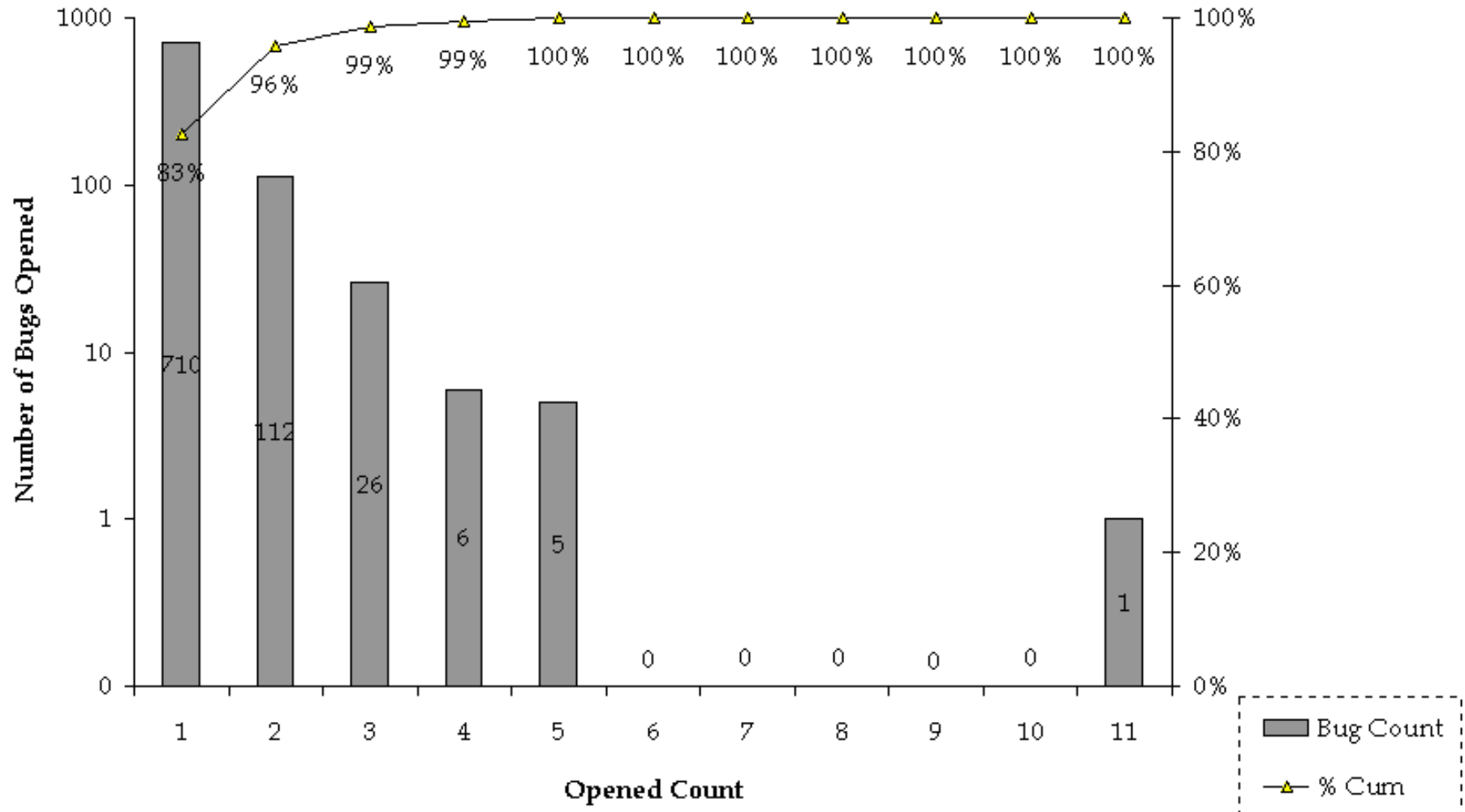
Case Study Home Equity Loan Application Bugs Subsystem Breakdown



Subsystem Most Affected by Bug



Case Study Home Equity Loan Application Bugs Opened Count Breakdown





Best Practices in Test Reporting

- Deliver useful, credible, timely information
- Tailor your presentation to your audience
- Know what you're talking about
- Keep your cool, manage controversial reports carefully, and recognize transference
- Avoid ambushing people with bad news
- Remember that the test status evolves during testing
- Suggest paths forward, connect to project success, and be a constructive influence



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