

User ID	Scenario	Activities						Object function factors								
		TZT (tagging-to-trace)				LZT (learning-to-trace)		Accuracy (F2)			Effort					
		Tag set	Tag distance (sd.)	New tags	Tag location	Tag appearance	Learning material	LM relation	LM quality	Initial RTM	tf-idf	Final RTM	Initial links	True links	Final RTM	
1	NFR Scenario 4	{displayed, rating, locate, radius, resolve, return, search, user, vehicle location, VRR, audit report, recycled parts}	0.13(0.07)	-	-	Both	Tail	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.5	36	6	8
1	NFR Scenario 2	{blank set, repair facility, redundant unknown, VRR system}	0.41(0.16)	{blank set}	-	Tracing source	Tail	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.38	36	8	17
2	NFR Scenario 4	{}	-	-	-	-	-	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.52	36	6	9
2	NFR Scenario 2	{}	-	-	-	-	-	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.61	36	8	4
3	NFR Scenario 2	{resolve zip, unknown, retain, rating, adjuster, storage}	0.20(0.10)	-	-	Tracing target	Tail	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.26	36	8	7
4	NFR Scenario 2	{audit report, recycled parts, repair facility rating, write new data, data retention}	0.32 (0.08)	{write new data, data retention}	-	Tracing source	Head	NFR Scenario 3	Neutral	Guarded	0.55	0.47	0.57	36	8	8
3	NFR Scenario 4	{miss rate, data loss, user interface, recycled parts, legitimate}	0.37(0.12)	{legitimate users, user interface}	-	Both	Tail	NFR Scenario 3	Negative	Guarded	0.5	0.51	0.27	36	6	7
5	NFR Scenario 2	{audit report, recycled parts, repair facility rating, retrieved}	0.18 (0.09)	-	-	Both	Head	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.42	36	8	12
4	NFR Scenario 4	{display data, recycled parts, system ability to perform, retrieve data}	0.27 (0.12)	{system ability to perform}	-	Both	Tail	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.53	36	6	13
5	NFR Scenario 4	{}	-	-	-	-	-	NFR Scenario 3	Negative	Guarded	0.5	0.51	0.57	36	6	7
6	NFR Scenario 2	{}	-	-	-	-	-	NFR Scenario 3	Neutral	Guarded	0.55	0.47	0.41	36	8	7
6	NFR Scenario 4	{audit report, average, latency, operations, users, radius, recycled parts, scale, search result, throughput, VRR system}	0.29 (0.16)	{search result}	-	Both	Tail	NFR Scenario 3	Negative	Guarded	0.5	0.51	0.67	36	6	11
7	NFR Scenario 2	{audit report, logs, notification, recycled part, suppliers, time, vehicle location, VRR system}	0.30 (0.16)	{logs, notification, write data}	-	Tracing target	Head	NFR Scenario 3	Neutral	Guarded	0.55	0.47	0.51	36	8	7
8	NFR Scenario 2	{display, integration, memory,persistent storage, overwrite, read, write}	0.19 (0.08)	-	-	Tracing source	Tail	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.59	36	8	9
7	NFR Scenario 4	{available to other users, 1500 users at a time, search components, regular search, customized search}	0.43 (0.18)	-	-	Tracing target	Tail	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0	36	6	5
9	NFR Scenario 2	{}	-	-	-	-	-	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.69	36	8	12
8	NFR Scenario 4	{}	-	-	-	-	-	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.36	36	6	8
9	NFR Scenario 4	{repair, recycled parts, users, rating, VRR system}	0.28 ( 0.12)	-	-	Tracing target	Head	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.6	36	6	6
10	NFR Scenario 2	{consistency, internal, external, data integraty, rollback, storage, time to failure, available, radius, not apply}	0.15 (0.22)	-	-	Both	Tail	NFR Scenario 3	Neutral	Guarded	0.55	0.47	0.64	36	8	5
10	NFR Scenario 4	{recycled parts, searched components, users, latency, throughput, legitimate users, VRR system , adjuster, estimator, zip code}	0.18(0.11)	{estimator}	-	Both	Tail	NFR Scenario 3	Negative	Guarded	0.5	0.51	0.64	36	6	7
11	NFR Scenario 4	{audit report, average, latency, operations, users, radius, recycled parts, scale, search result, throughput, VRR system}	0.50 (0.19)	-	-	Both	Head	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.69	36	6	9
11	NFR Scenario 2	{audit report, logs, average}	0.33 (0.13)	-	-	Tracing target	Tail	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.53	36	8	4
12	NFR Scenario 4	{integration, memory, overwrite, read, write, repair}	0.47(0.21)	-	-	Tracing source	Head	NFR Scenario 3	Neutral	Guarded	0.5	0.51	0.72	36	6	6
12	NFR Scenario 2	{recycled parts, searched, throughput, users, VRR system , adjuster, estimator, zip code, suppliers}	0.19 (0.13)	{suppliers}	-	Tracing target	Tail	NFR Scenario 3	Negative	Guarded	0.55	0.47	0.55	36	8	3
13	NFR Scenario 4	{ latency, throughput, legitimate users, VRR system }	0.24 (0.13)	-	-	Both	Tail	NFR Scenario 1	Neutral	Guarded	0.5	0.51	0.62	36	6	7
13	NFR Scenario 2	{}	-	-	-	-	-	NFR Scenario 1	Positive	Guarded	0.55	0.47	0.38	36	8	8
14	NFR Scenario 4	{recycled parts, components, users, suppliers}	0.13 (0.07)	-	-	Both	Tail	NFR Scenario 3	Neutral	Guarded	0.5	0.51	0.46	36	6	11
14	NFR Scenario 2	{audit report, logs, recycled part, vehicle location, VRR system}	0.13(0.12)	-	-	Tracing source	Tail	NFR Scenario 3	Negative	Guarded	0.55	0.47	0.21	36	8	9
15	NFR Scenario 1	{displayed, rating, unknown, locate, radius, }	0.12 (0.06)	-	-	Both	Tail	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.59	36	15	18
15	NFR Scenario 3	{blank set, repair facility, r, VRR system, set}	0.39 (0.13)	{set}	-	Tracing source	Tail	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.75	36	17	17
16	NFR Scenario 1	{available to other users, 1500 users at a time, search components, regular search, zip code}	0.27 (0.08)	-	-	Tracing target	Tail	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.23	36	15	12
16	NFR Scenario 3	{}	-	-	-	-	-	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.68	36	17	12
17	NFR Scenario 1	{resolve zip, unknown, retain, rating, adjuster, storage}	0.09 (0.08)	-	-	Tracing target	Tail	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.28	36	15	13
17	NFR Scenario 3	{audit report, recycled parts, repair facility rating, write new data, data retention, modify}	0.27 (0.11)	{modify}	-	Tracing source	Head	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.57	36	17	9
18	NFR Scenario 1	{miss rate, data loss, user interface, intigration, recycled parts, legitimate}	0.34(0.13)	-	-	Both	Tail	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.27	36	15	11
18	NFR Scenario 3	{audit report, recycled parts, repair facility rating, retrieved, parts, searched components, users, latency, throughput, scale, search result}	0.12 (0.12)	-	-	Both	Head	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.46	36	17	12
19	NFR Scenario 1	{display data, recycled parts, backup database, system ability to perform, retrieve data}	0.32 (0.13)	{backup database}	-	Both	Tail	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.72	36	15	14
19	NFR Scenario 3	{}	-	-	-	-	-	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.68	36	17	22
20	NFR Scenario 1	{}	-	-	-	-	-	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.81	36	15	21
20	NFR Scenario 3	{audit report, average, , , radius, recycled parts, scale, output, throughput, VRR system}	0.31 (0.13)	{output}	-	Both	Tail	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.85	36	17	11
21	NFR Scenario 1	{ audit, notification, write, repair, suppliers, time, delete, update, save, vehicle location, VRR system, search}	0.13 (0.05)	{delete, update, save}	-	Tracing target	Head	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.28	36	15	12
21	NFR Scenario 3	{display, integration, memory,persistent storage, overwrite, read, write}	0.07 (0.09)	-	-	Tracing source	Tail	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.87	36	17	9
22	NFR Scenario 1	{}	-	-	-	-	-	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.73	36	15	12
22	NFR Scenario 3	{repair, recycled parts, users, rating, VRR system, overwrite, read}	0.23 ( 0.12)	-	-	Tracing target	Head	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.74	36	17	17
23	NFR Scenario 1	{consistency, internal, external, data integraty, rollback, storage, time to failure, available, radius, not apply}	0.16 (0.24)	-	-	Both	Tail	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.68	36	15	18
23	NFR Scenario 3	{recycled parts, legitimate users, VRR system , adjuster, estimator, zip code, storage}	0.15 (0.13)	{storage}	-	Both	Tail	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.64	36	17	15
24	NFR Scenario 1	{}	-	-	-	-	-	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.82	36	15	16
24	NFR Scenario 3	{}	-	-	-	-	-	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.55	36	17	12
25	NFR Scenario 1	{integration, memory, overwrite, read, write, repair}	0.27(0.21)	-	-	Tracing source	Head	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.79	36	15	12
25	NFR Scenario 3	{recycled parts, searched, throughput, users, VRR system , adjuster, estimator, redundant}	0.14 (0.14)	{redundent}	-	Tracing target	Tail	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.58	36	17	11
26	NFR Scenario 1	{ latency, throughput, legitimate users, latency, VRR system }	0.32 (0.17)	-	-	Both	Tail	NFR Scenario 2	Positive	Guarded	0.78	0.62	0.83	36	15	13
26	NFR Scenario 3	{}	-	-	-	-	-	NFR Scenario 2	Neutral	Guarded	0.82	0.61	0.82	36	17	17
27	NFR Scenario 1	{recycled parts, components, users, suppliers}	0.17 (0.09)	-	-	Both	Tail	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.73	36	15	11
27	NFR Scenario 3	{ audit report, logs, recycled part, vehicle location, VRR system}	0.18(0.17)	-	-	Tracing source	Tail	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.76	36	17	19
28	NFR Scenario 1	{audit report, logs, average}	0.50 (0.14)	-	-	Both	Head	NFR Scenario 4	Neutral	Guarded	0.78	0.62	0.47	36	15	22
28	NFR Scenario 3	{integration, memory}	0.36 (0.14)	-	-	Tracing target	Tail	NFR Scenario 4	Negative	Guarded	0.82	0.61	0.43	36	17	23