

## Dynamic Domain Track Results

The following tables give the evaluation scores for the Dynamic Domain track’s measures for each of ten search iterations for each run submitted to the track. The measures are:

**CT:** Cube Test

**nCT:** normalized Cube Test

**sDCG:** Session Discounted Cumulative Gain

**nsDCG:** normalized Session Discounted Cumulative Gain

**EU:** Expected Utility

**nEU:** normalized Expected Utility

Table 1: Scores for Iteration 1

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.269	0.273	9.955	0.278	6.865	0.318
clip_baseline	0.454	0.459	14.599	0.427	10.951	0.342
clip_filter	0.269	0.273	9.955	0.278	6.865	0.318
dqn_5_actions	0.470	0.476	15.485	0.446	11.612	0.350
dqn_semantic_state	0.468	0.474	14.899	0.462	11.186	0.347
galago_baseline	0.451	0.456	13.784	0.434	10.248	0.343
ictnet_div_qe	0.462	0.468	15.228	0.454	10.884	0.341
ictnet_emulti	0.462	0.468	15.228	0.454	10.884	0.341
ictnet_fom_itr1	0.498	0.503	14.814	0.461	11.011	0.344
ictnet_params1_s	0.462	0.468	15.228	0.454	10.884	0.341
ictnet_params2_ns	0.462	0.468	15.228	0.454	10.884	0.341

Table 2: Scores for Iteration 2

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.153	0.310	13.341	0.294	9.428	0.518
clip_baseline	0.267	0.540	19.566	0.439	15.105	0.539
clip_filter	0.156	0.318	12.829	0.274	8.707	0.515
dqn_5_actions	0.276	0.559	21.655	0.476	17.493	0.554
dqn_semantic_state	0.294	0.594	20.909	0.467	16.890	0.547
galago_baseline	0.272	0.551	19.856	0.459	16.323	0.548
ictnet_div_qe	0.292	0.590	22.056	0.495	17.308	0.545
ictnet_emulti	0.292	0.590	22.056	0.495	17.308	0.545
ictnet_fom_itr1	0.296	0.598	22.148	0.497	18.886	0.549
ictnet_params1_s	0.291	0.589	21.923	0.490	17.371	0.545
ictnet_params2_ns	0.291	0.589	21.923	0.490	17.371	0.545

Table 3: Scores for Iteration 3

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.107	0.326	15.003	0.297	9.881	0.612
clip_baseline	0.190	0.578	22.456	0.442	17.555	0.633
clip_filter	0.111	0.337	14.091	0.267	8.300	0.607
dqn_5_actions	0.193	0.587	24.872	0.480	20.010	0.647
dqn_semantic_state	0.222	0.672	24.127	0.469	20.168	0.642
galago_baseline	0.194	0.588	22.657	0.459	18.660	0.640
ictnet_div_qe	0.208	0.631	24.934	0.493	19.610	0.637
ictnet_emulti	0.208	0.631	24.934	0.493	19.610	0.637
ictnet_fom_itr1	0.206	0.627	25.137	0.495	21.330	0.641
ictnet_params1_s	0.207	0.628	25.058	0.497	20.012	0.638
ictnet_params2_ns	0.207	0.628	25.058	0.497	19.963	0.638

Table 4: Scores for Iteration 4

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.083	0.337	16.039	0.296	9.523	0.670
clip_baseline	0.151	0.611	24.461	0.448	18.959	0.691
clip_filter	0.109	0.442	14.091	0.247	7.221	0.664
dqn_5_actions	0.150	0.609	26.828	0.482	21.136	0.703
dqn_semantic_state	0.185	0.746	25.328	0.456	20.706	0.697
galago_baseline	0.148	0.601	24.154	0.453	18.999	0.694
ictnet_div_qe	0.168	0.681	26.601	0.488	20.971	0.694
ictnet_emulti	0.168	0.681	26.601	0.489	20.971	0.694
ictnet_fom_itr1	0.168	0.680	26.896	0.489	22.540	0.697
ictnet_params1_s	0.169	0.685	26.512	0.487	21.064	0.695
ictnet_params2_ns	0.159	0.645	26.822	0.494	20.902	0.694

Table 5: Scores for Iteration 5

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.344	16.834	0.295	8.727	0.709
clip_baseline	0.123	0.621	25.992	0.449	19.672	0.730
clip_filter	0.109	0.552	14.091	0.234	6.545	0.705
dqn_5_actions	0.124	0.629	28.197	0.484	21.058	0.740
dqn_semantic_state	0.169	0.854	25.811	0.444	20.372	0.734
galago_baseline	0.121	0.613	25.342	0.451	19.134	0.732
ictnet_div_qe	0.154	0.778	27.702	0.484	22.013	0.734
ictnet_emulti	0.154	0.778	27.702	0.484	22.013	0.734
ictnet_fom_itr1	0.152	0.767	28.100	0.482	23.572	0.736
ictnet_params1_s	0.153	0.778	27.635	0.480	21.973	0.734
ictnet_params2_ns	0.130	0.657	28.465	0.498	21.576	0.733

Table 6: Scores for Iteration 6

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.413	16.834	0.283	8.727	0.741
clip_baseline	0.123	0.746	25.992	0.432	19.672	0.759
clip_filter	0.109	0.663	14.091	0.225	6.545	0.737
dqn_5_actions	0.111	0.677	29.243	0.484	21.394	0.768
dqn_semantic_state	0.159	0.963	26.136	0.433	20.125	0.762
galago_baseline	0.103	0.624	26.502	0.452	19.169	0.761
ictnet_div_qe	0.148	0.901	28.222	0.473	22.594	0.763
ictnet_emulti	0.148	0.901	28.222	0.473	22.594	0.763
ictnet_fom_itr1	0.146	0.886	28.641	0.472	24.114	0.765
ictnet_params1_s	0.148	0.900	28.046	0.468	22.242	0.763
ictnet_params2_ns	0.109	0.661	29.346	0.495	21.081	0.760

Table 7: Scores for Iteration 7

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.482	16.834	0.274	8.727	0.765
clip_baseline	0.123	0.870	25.992	0.419	19.672	0.782
clip_filter	0.109	0.773	14.091	0.219	6.545	0.762
dqn_5_actions	0.101	0.719	29.968	0.484	21.287	0.790
dqn_semantic_state	0.153	1.083	26.452	0.426	19.983	0.784
galago_baseline	0.089	0.632	27.699	0.455	19.628	0.784
ictnet_div_qe	0.147	1.044	28.405	0.462	22.699	0.786
ictnet_emulti	0.147	1.044	28.405	0.462	22.699	0.786
ictnet_fom_itr1	0.144	1.019	28.895	0.461	24.359	0.788
ictnet_params1_s	0.146	1.036	28.213	0.457	22.350	0.785
ictnet_params2_ns	0.095	0.671	30.118	0.493	20.291	0.781

Table 8: Scores for Iteration 8

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.551	16.834	0.267	8.727	0.785
clip_baseline	0.123	0.994	25.992	0.409	19.672	0.800
clip_filter	0.109	0.883	14.091	0.214	6.545	0.782
dqn_5_actions	0.094	0.761	30.625	0.486	21.175	0.808
dqn_semantic_state	0.150	1.208	26.668	0.418	19.695	0.802
galago_baseline	0.079	0.642	28.437	0.456	18.992	0.801
ictnet_div_qe	0.146	1.187	28.574	0.454	22.915	0.804
ictnet_emulti	0.146	1.187	28.574	0.454	22.915	0.804
ictnet_fom_itr1	0.143	1.160	28.982	0.451	24.440	0.805
ictnet_params1_s	0.145	1.180	28.326	0.448	22.497	0.803
ictnet_params2_ns	0.085	0.685	31.015	0.494	19.815	0.799

Table 9: Scores for Iteration 9

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.620	16.834	0.262	8.727	0.802
clip_baseline	0.123	1.119	25.992	0.402	19.672	0.815
clip_filter	0.109	0.994	14.091	0.210	6.545	0.799
dqn_5_actions	0.088	0.799	31.197	0.485	20.926	0.822
dqn_semantic_state	0.148	1.341	26.915	0.412	19.754	0.817
galago_baseline	0.071	0.647	29.224	0.459	18.717	0.816
ictnet_div_qe	0.146	1.332	28.654	0.446	22.976	0.819
ictnet_emulti	0.146	1.332	28.654	0.446	22.976	0.819
ictnet_fom_itr1	0.143	1.303	29.085	0.443	24.578	0.821
ictnet_params1_s	0.145	1.325	28.453	0.441	22.664	0.819
ictnet_params2_ns	0.076	0.695	32.059	0.500	20.049	0.814

Table 10: Scores for Iteration 10

	CT	nCT	sDCG	nsDCG	EU	nEU
clip_addwords	0.068	0.689	16.834	0.258	8.727	0.816
clip_baseline	0.123	1.243	25.992	0.396	19.672	0.828
clip_filter	0.109	1.104	14.091	0.207	6.545	0.813
dqn_5_actions	0.082	0.834	31.766	0.485	20.928	0.835
dqn_semantic_state	0.146	1.478	27.119	0.411	19.826	0.830
galago_baseline	0.064	0.651	29.642	0.458	17.973	0.828
ictnet_div_qe	0.146	1.478	28.739	0.440	23.066	0.832
ictnet_emulti	0.146	1.478	28.739	0.440	23.066	0.832
ictnet_fom_itr1	0.143	1.446	29.160	0.437	24.668	0.833
ictnet_params1_s	0.145	1.470	28.542	0.435	22.763	0.832
ictnet_params2_ns	0.069	0.697	32.840	0.503	19.157	0.826