INFORMATION RETRIEVAL FACILITY

CLEF-IP 2010: Prior Art Candidates Search Evaluation Summary

Florina Piroi

ABSTRACT: This report presents the detailed evaluation measures done in the frame of the CLEF-IP 2010 benchmarking activity, Prior Art Candidates Search Task.

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1 Introduction

In 2010, CLEF–IP[1] included two tasks: The Prior Art Candidate Search task (PAC) and the Classification task (CLS). Participants in the PAC task were asked to return documents in the corpus that could constitute prior art for a given topic patent. Participants in the CLS task were given patent documents that had to be classified using the IPC codes. This paper presents the evaluation results on the PAC submissions.

9 teams, alphabetically presented in Table 1, have submitted runs to the Prior Art Candidates search task (PAC). In total, we received 28 runs out of which 9 runs contained retrieval experiments for the small set of topics (500 topics), and 19 for the large set of topics (2000).

For each of the experiments we used `trec_eval` version 9.0 to compute the following measures:

- Precision, Precision@5, Precision@10, Precision@50, Precision@100
- Recall, Recall@5, Recall@10, Recall@50, Recall@100
- MAP
- NDCG

In addition to these, we also compute the PRES[2] score as an experimental, recall oriented measure. All evaluations were made such that topics for which no relevant results were retrieved, contributed 0 to the average measure.

2 Evaluation Bundles and Qrels

We created two evaluation bundles corresponding to the small and large experiment sizes:

- small evaluation bundle (499 topics)
- large evaluation bundle (2000 topics)

The large evaluation bundle contains all runs that have returned results for the large topic set. As communicated to participants, the small topic set—with one exception—is a (reordered) subset of the large topic set. Therefore, part of the small evaluation bundle are not only the runs specifically using the small topic set, but also the large runs, restricted to the topics in the small set.

The excepted topic in the small evaluation bundle is topic PACs-9 which was left out of the evaluations because it is not part of the large topic set. Hence, the small evaluation bundle is done over 499 topics and not 500. By leaving the mentioned topic out of the evaluations we avoided the case where it would have contributed 0 to the measure averages as all small runs extracted from the large runs would have not contained it[3].

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[1] See http://www.ir-facility.org/research/evaluation/clef-ip-10 for details

[2] Magdy W. and G. J. F. Jones. PRES: A Score Metric for Evaluating Recall-Oriented Information Retrieval Applications. SIGIR 2010

[3] This evaluation behavior can be, of course, changed. Further evaluations will be presented at the CLEF–IP lab day at the CLEF conference in September 2010.

Table 1: List of participants and runs submitted to the PAC task

ID	Institution		Runs
bitem	BiTeM, Service of Medical Informatics, Geneva University Hospitals	CH	2 all
dcu	Dublin City Univ. - School of Computing	IE	3 all
hild	Hildesheim Univ. - Information Science	DE	4 small
humb	Humboldt Univ. - Dept. of German Language and Linguistics	DE	1 all
run	Information Foraging Lab, Radboud University Nijmegen	NL	2 small
spq	Spinque	NL	1 all
uaic	Al. I. Cuza University of Iaşi - Natural Language Processing	RO	1 all
ui	Information Retrieval Group, Universitas Indonesia	ID	3 all, 3 small
uned	UNED - E.T.S.I. Informatica, Dpto. Lenguajes y Sistemas Informaticos	ES	8 all

In addition to the two size bundles—and differently from CLEF–IP09 where separate topic sets for the language tasks were given—we have done evaluations on topic sets where the topic document language was English, German, and French, respectively. These topic sets were extracted from the large topic set, resulting in 1348 English language topics, 518 German topics and 134 French topics.

The relevance assessments files contain relevant documents for each of the topic in the various subsets and are based on existing patent citations extended to include also simple family members of the patent citations. The assessment files provide two levels of relevancy: 1 (relevant) and 2 (highly relevant). Based on the relevance assessments available to us (patent citations) we assigned relevance level 2 to all citations that were marked with 'X', 'Y', or were citations mentioned in patent opposition procedures. We assigned level 1 to all other citations. If a citation occurred twice we used the one with the highest relevancy level. The relevancy levels are used in the NDCG computations as gain levels (see the `trec_eval` documentation).

The rest of this paper list the measure results we have computed.

3   Measurements

3.1   Run Files Information

We show here a list of the runs that are part of the evaluation. The second column of these tables present the short run ids that, for clarity and space reasons, will later be used in the rest of the result listings. The last column shows an average of documents retrieved per topic, which also gives an idea on the size of the run files. In this paper, all entries in all tables are alphabetically ordered by the run file names.

Table 2: Files in the large bundle

	Short Id	Run file name	Average documents retrieved per topic
1	bitem-1	bitem_applicantView_PAC_all	662.84
2	bitem-2	bitem_examinerView_PAC_all	663.16
3	dcu-1	dcu_cit_run1_PAC_all	9.82
4	dcu-3	dcu_IR_cit_run3_PAC_all	999.35
5	dcu-2	dcu_IR_run2_PAC_all	1000.
6	humb	humb_patatras_run1_PAC_all	748.09
7	spq	spq_catbm25_Run1_PAC_all	902.91
			Continued on the next page

Table 2: Files in the large bundle, continued

	Short Id	Run file name	Average documents retrieved per topic
8	uaic	uaic_mymethod_run2_PAC_all	8.
9	ui-2	ui_claims_Run2_PAC_all	1000.
10	ui-3	ui_title_desc_claims_Run3_PAC_all	1000.
11	ui-1	ui_title_desc_Run1_PAC_all	1000.
12	uned-1	uned_BM25F_run1_PAC_all	1000.
13	uned-2	uned_BM25F_run2_PAC_all	1000.
14	uned-3	uned_BM25F_run3_PAC_all	1000.
15	uned-4	uned_BM25F_run4_PAC_all	1000.
16	uned-5	uned_BM25F_run5_PAC_all	1000.
17	uned-6	uned_BM25F_run6_PAC_all	1000.
18	uned-7	uned_BM25F_run7_PAC_all	1000.
19	uned-8	uned_BM25F_run8_PAC_all	1000.

The suffix '-S' in the table below marks the runs in the small evaluation bundle that were extracted from the runs in the large evaluation bundle. The suffix '-small' marks the runs that were submitted using the small topic set only.

Table 3: Files in the small bundle

	Short Id	Run file name	Average documents retrieved per topic
1	bitem-1-S	bitem_applicantView_PAC_small	660.86
2	bitem-2-S	bitem_examinerView_PAC_small	661.21
3	dcu-1-S	dcu_cit_run1_PAC_small	10.81
4	dcu-3-S	dcu_IR_cit_run3_PAC_small	998.77
5	dcu-2-S	dcu_IR_run2_PAC_small	999.39
6	hild-1-small	hild_method1_run1_PAC_small	694.51
7	hild-2-small	hild_method2_run2_PAC_small	904.27
8	hild-3-small	hild_method3_run3_PAC_small	817.78
9	hild-4-small	hild_method4_run4_PAC_small	783.40
10	humb-S	humb_patatras_run1_PAC_small	734.05
11	run-1-small	run_lrmTACDnoTFIDF_PAC_small	100.
12	run-2-small	run_lrmTACDwithTFIDF_PAC_small	100.
13	spq-S	spq_catbm25_Run1_PAC_small	900.70
14	uaic-S	uaic_mymethod_run2_PAC_small	8.
15	ui-2-small	ui_claims_Run2_PAC_small	1000.
16	ui-3-small	ui_title_desc_claims_Run3_PAC_small	1000.
17	ui-1-small	ui_title_desc_Run1_PAC_small	1000.
18	uned-1-S	uned_BM25F_run1_PAC_small	1000.
19	uned-2-S	uned_BM25F_run2_PAC_small	1000.
20	uned-3-S	uned_BM25F_run3_PAC_small	1000.
21	uned-4-S	uned_BM25F_run4_PAC_small	1000.
22	uned-5-S	uned_BM25F_run5_PAC_small	1000.
23	uned-6-S	uned_BM25F_run6_PAC_small	1000.
24	uned-7-S	uned_BM25F_run7_PAC_small	1000.
25	uned-8-S	uned_BM25F_run8_PAC_small	1000.

3.2 Large and Small Topic Sets Measurements

Where not else mentioned, the cutoff for the measure computation is 1000.

Table 4: Detailed measures for the PAC task, large topic set

run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES
bitem-1	0.1057	0.0229	0.2015	0.1644	0.0812	0.0548	0.4738	0.0582	0.0922	0.2138	0.2825	0.2688	0.03249	0.05877	0.3183
bitem-2	0.1404	0.0251	0.2864	0.2189	0.0921	0.0597	0.4892	0.0825	0.1208	0.2391	0.3048	0.3075	0.03587	0.06363	0.3304
dcu-1	0.112	0.3117	0.2571	0.1988	0.0566	0.0284	0.1187	0.0675	0.0939	0.1185	0.1187	0.1496	0.1166	0.1176	0.1186
dcu-3	0.2029	0.0133	0.3642	0.3172	0.1325	0.0807	0.618	0.106	0.1704	0.3183	0.3846	0.3894	0.2651	0.3162	0.5229
dcu-2	0.1216	0.012	0.2209	0.1801	0.0887	0.0598	0.57	0.0654	0.1036	0.232	0.3036	0.3068	0.1735	0.2281	0.4614
humb	0.2645	0.0273	0.4209	0.3482	0.1603	0.1027	0.6945	0.1279	0.197	0.3917	0.4809	0.4614	0.3193	0.3907	0.6187
spq	0.1139	0.0144	0.201	0.1681	0.0847	0.0578	0.5569	0.0593	0.0939	0.2215	0.2937	0.2975	0.1636	0.2167	0.4527
uaic	0.007	0.0249	0.0291	0.02	0.004	0.002	0.0111	0.0085	0.0111	0.0111	0.0111	0.0151	0.01067	0.01089	0.01109
ui-2	0.0457	0.0059	0.1153	0.0916	0.0417	0.028	0.2827	0.0322	0.05	0.1073	0.1413	0.1592	0.07854	0.104	0.2211
ui-3	0.0581	0.007	0.1428	0.1141	0.0526	0.0344	0.3301	0.0401	0.0625	0.1346	0.1724	0.1898	0.099	0.1292	0.2631
ui-1	0.052	0.0064	0.134	0.103	0.0474	0.0312	0.2937	0.0361	0.0547	0.1173	0.1514	0.1705	0.0862	0.1129	0.2328
uned-1	0.0927	0.0095	0.179	0.1446	0.0752	0.0505	0.4375	0.0489	0.078	0.1874	0.2443	0.2429	0.138	0.1823	0.3589
uned-2	0.1051	0.0099	0.2027	0.1631	0.0812	0.0543	0.4565	0.0575	0.0907	0.2057	0.2663	0.262	0.1526	0.2001	0.3792
uned-3	0.0963	0.0095	0.1883	0.1535	0.0756	0.0507	0.4367	0.0526	0.0843	0.1903	0.2475	0.2474	0.1417	0.1856	0.3612
uned-4	0.1054	0.0099	0.2026	0.1633	0.0813	0.0543	0.4569	0.0575	0.0911	0.2054	0.2664	0.2624	0.1528	0.2003	0.3797
uned-5	0.0966	0.0095	0.1891	0.1531	0.0755	0.0507	0.4374	0.0529	0.084	0.1897	0.2476	0.2479	0.1419	0.1857	0.3617
uned-6	0.0901	0.0095	0.1751	0.1408	0.0743	0.0512	0.4353	0.047	0.0743	0.1838	0.2477	0.2402	0.1347	0.1809	0.359
uned-7	0.0848	0.0089	0.1718	0.1336	0.0687	0.0465	0.4048	0.0476	0.0724	0.1677	0.221	0.2253	0.1243	0.1641	0.3301
uned-8	0.0935	0.0094	0.181	0.1446	0.0741	0.0503	0.4341	0.0498	0.0792	0.186	0.2447	0.2424	0.1375	0.1816	0.3578
run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES

run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES
bitem-1-S	0.1033	0.0227	0.1964	0.1679	0.0814	0.0542	0.4739	0.0549	0.0952	0.2158	0.2813	0.267	0.0336	0.3197	0.3191
bitem-2-S	0.1394	0.024	0.2826	0.2261	0.0933	0.0598	0.4903	0.0779	0.1251	0.2433	0.3065	0.3073	0.03569	0.3322	0.3315
dcu-1-S	0.1107	0.3105	0.2621	0.2032	0.0581	0.0293	0.1166	0.0656	0.0915	0.1164	0.1166	0.1496	0.1149	0.1165	0.1163
dcu-3-S	0.1986	0.0135	0.3615	0.315	0.1367	0.0832	0.6245	0.1025	0.1629	0.3183	0.3844	0.3904	0.2619	0.5294	0.5283
dcu-2-S	0.1175	0.012	0.214	0.1727	0.0917	0.0609	0.5711	0.0611	0.0949	0.2348	0.3041	0.3045	0.1711	0.4642	0.4633
hild-1-small	0.0414	0.0125	0.0914	0.0758	0.0432	0.0302	0.3298	0.0259	0.0431	0.1193	0.1689	0.1645	0.08009	0.2628	0.2622
hild-2-small	0.0493	0.0124	0.087	0.077	0.0487	0.0362	0.4816	0.0237	0.0413	0.1341	0.1922	0.2085	0.08362	0.3559	0.3552
hild-3-small	0.0415	0.0109	0.0922	0.0762	0.0439	0.031	0.3665	0.0257	0.0431	0.1236	0.1726	0.1763	0.08157	0.2855	0.2849
hild-4-small	0.0422	0.0116	0.0938	0.0768	0.0433	0.0307	0.3605	0.0256	0.0438	0.1218	0.169	0.1751	0.08137	0.2814	0.2809
humb-S	0.2731	0.0289	0.4244	0.3625	0.1706	0.1079	0.7148	0.129	0.2097	0.4182	0.4991	0.4775	0.3363	0.6422	0.6409
run-1-small	0.0274	0.0255	0.0786	0.0593	0.0314	0.0244	0.1253	0.0228	0.0344	0.0857	0.1253	0.0895	0.0583	0.1214	0.1215
run-2-small	0.0291	0.0255	0.0826	0.0643	0.0331	0.0244	0.1253	0.024	0.0376	0.0902	0.1253	0.0919	0.05953	0.1214	0.1216
spq-S	0.1132	0.0145	0.1968	0.1603	0.0874	0.0583	0.5602	0.0586	0.0892	0.2322	0.2962	0.2984	0.1657	0.4588	0.4579
uaic-S	0.0076	0.0245	0.0293	0.0196	0.0039	0.002	0.011	0.0087	0.011	0.011	0.011	0.0158	0.01064	0.01099	0.01097
ui-2-small	0.0441	0.0059	0.113	0.0924	0.0428	0.0284	0.2756	0.0304	0.0499	0.1096	0.1422	0.1559	0.07953	0.2175	0.2171
ui-3-small	0.0537	0.007	0.1319	0.109	0.0522	0.0348	0.3332	0.0341	0.0566	0.1279	0.1675	0.1846	0.09303	0.2645	0.264
ui-1-small	0.0425	0.0062	0.1114	0.0906	0.0454	0.0303	0.2859	0.0267	0.0427	0.1031	0.1384	0.1551	0.07305	0.2219	0.2215
uned-1-S	0.0873	0.0097	0.1623	0.1337	0.0756	0.0519	0.4452	0.0419	0.0697	0.1831	0.2448	0.2414	0.1343	0.3642	0.3635
uned-2-S	0.0958	0.0101	0.176	0.1483	0.0804	0.0555	0.462	0.0466	0.0818	0.1985	0.2711	0.256	0.1443	0.3851	0.3843
uned-3-S	0.0868	0.0098	0.1675	0.1397	0.074	0.0511	0.4435	0.0431	0.0725	0.1809	0.2464	0.2417	0.1336	0.3665	0.3658
uned-4-S	0.0962	0.0101	0.1768	0.1497	0.0808	0.0556	0.4617	0.0466	0.0823	0.1987	0.2713	0.2563	0.1445	0.3855	0.3847
uned-5-S	0.0867	0.0098	0.1679	0.1391	0.074	0.0511	0.4442	0.0432	0.072	0.1805	0.2464	0.242	0.1336	0.3671	0.3664
uned-6-S	0.0846	0.0098	0.1643	0.1319	0.0746	0.0533	0.4422	0.0413	0.0651	0.1808	0.2508	0.2384	0.1297	0.3643	0.3636
uned-7-S	0.0745	0.0092	0.1451	0.1168	0.0673	0.0474	0.4142	0.0357	0.0583	0.1604	0.2177	0.2189	0.115	0.3346	0.3339
uned-8-S	0.0867	0.0097	0.1675	0.1355	0.0739	0.0509	0.4409	0.042	0.0712	0.1774	0.242	0.2394	0.1306	0.3606	0.3599
run id	**MAP**	**P**	**P5**	**P10**	**P50**	**P100**	**R**	**R5**	**R10**	**R50**	**R100**	**nDCG**	**PRES50**	**PRES100**	**PRES**

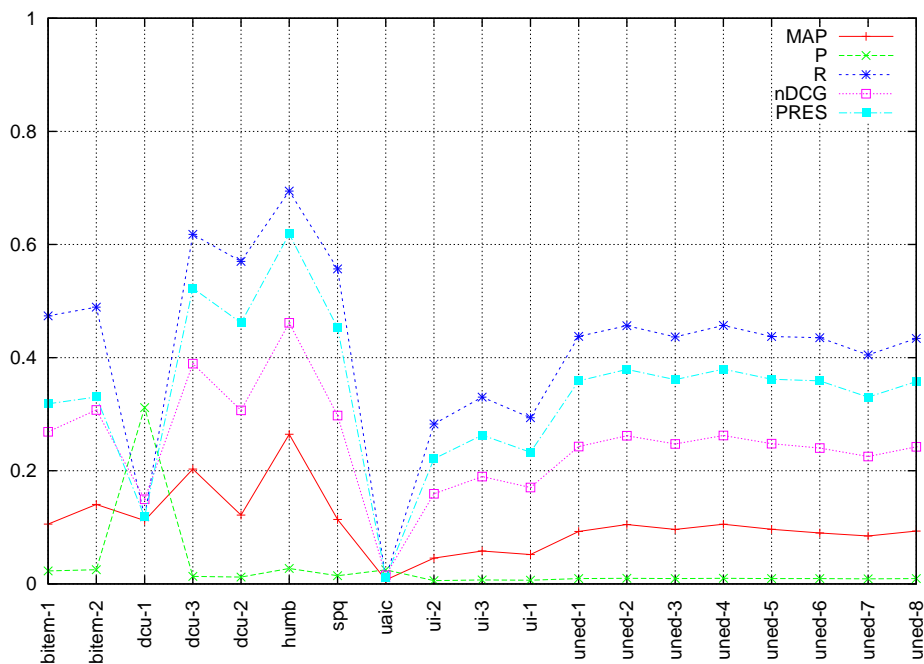Table 5: Detailed measures for the Pac task, small topic set

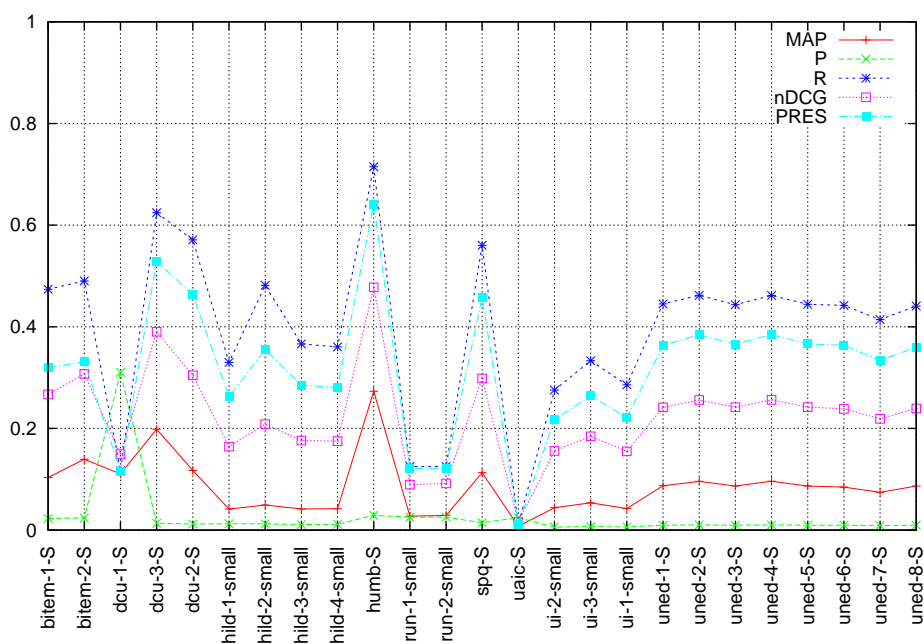Figure 1: Graphical representation of the evaluation results for the large topic set.

Figure 2: Graphical representation of the evaluation results for the small topic set.

3.3 Language Topic Sets Measurements

Table 6: Detailed measures for the PAC task, English topic subset

run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	NDCG	PRES50	PRES100	PRES
bitem-1	0.1094	0.022	0.2067	0.1688	0.0844	0.0576	0.4813	0.059	0.0926	0.2127	0.2821	0.2757	0.02947	0.05315	0.3147
bitem-2	0.1226	0.0229	0.2432	0.1924	0.0897	0.06	0.4869	0.0677	0.1023	0.2223	0.2904	0.2912	0.03038	0.05442	0.3187
dcu-1	0.0594	0.1905	0.1576	0.1251	0.0384	0.0194	0.0658	0.0335	0.0476	0.0655	0.0658	0.0844	0.06373	0.06478	0.06566
dcu-3	0.1807	0.014	0.3269	0.2837	0.1295	0.0815	0.616	0.0897	0.1459	0.2989	0.373	0.3735	0.2398	0.2965	0.5167
dcu-2	0.1386	0.013	0.2528	0.2065	0.1002	0.0673	0.5886	0.0731	0.1161	0.2534	0.3298	0.3303	0.1919	0.2502	0.483
humb	0.2264	0.0266	0.3568	0.2984	0.1521	0.1024	0.6946	0.1057	0.1664	0.3659	0.4675	0.434	0.2851	0.3657	0.6149
spq	0.1108	0.0139	0.1895	0.1628	0.0858	0.06	0.5762	0.0537	0.0872	0.2145	0.2908	0.3	0.1566	0.2115	0.4626
uaic	0.0048	0.0235	0.0254	0.0188	0.0038	0.0019	0.0094	0.0065	0.0094	0.0094	0.0094	0.0119	0.008875	0.009122	0.009345
ui-2	0.055	0.0073	0.134	0.1073	0.0501	0.034	0.3473	0.0372	0.0582	0.1287	0.1705	0.1931	0.09372	0.1249	0.2705
ui-3	0.0702	0.0087	0.1672	0.1367	0.0634	0.0416	0.4054	0.0468	0.074	0.1599	0.2053	0.2302	0.1182	0.154	0.3212
ui-1	0.0621	0.008	0.1556	0.122	0.057	0.0377	0.3605	0.0412	0.0631	0.1383	0.1806	0.2056	0.1012	0.1336	0.2838
uned-1	0.1047	0.011	0.2009	0.1609	0.0812	0.0557	0.4945	0.055	0.087	0.1978	0.2628	0.2713	0.1476	0.195	0.3996
uned-2	0.1168	0.0116	0.2159	0.1764	0.0894	0.0612	0.5234	0.061	0.0979	0.2239	0.2932	0.2922	0.165	0.2185	0.429
uned-3	0.1061	0.0111	0.1993	0.1636	0.0818	0.0563	0.4964	0.0551	0.0887	0.2029	0.2687	0.274	0.1513	0.1998	0.4046
uned-4	0.1169	0.0116	0.2151	0.176	0.0894	0.0613	0.5233	0.0609	0.0983	0.2232	0.2932	0.2923	0.165	0.2187	0.4294
uned-5	0.1063	0.0111	0.2	0.1628	0.0818	0.0563	0.497	0.0553	0.0883	0.2027	0.2688	0.2745	0.1513	0.1998	0.405
uned-6	0.102	0.0111	0.1976	0.1593	0.0798	0.0565	0.491	0.0527	0.0832	0.192	0.2658	0.2683	0.1437	0.1929	0.3989
uned-7	0.0918	0.0102	0.1853	0.1423	0.0723	0.0496	0.446	0.0504	0.075	0.1714	0.2298	0.2439	0.1283	0.1695	0.3575
uned-8	0.1061	0.0109	0.203	0.1623	0.0801	0.0555	0.4898	0.0561	0.0887	0.1967	0.2635	0.2709	0.1478	0.1949	0.398
run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	NDCG	PRES50	PRES100	PRES

Table 7: Detailed measures for the PAC task, German topic subset

run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES
bitem-1	0.0984	0.0259	0.1942	0.1535	0.0753	0.0501	0.4559	0.0582	0.0901	0.2169	0.288	0.2549	0.04088	0.07419	0.3283
bitem-2	0.1907	0.0317	0.4081	0.2913	0.102	0.0622	0.4986	0.1243	0.1687	0.2852	0.3485	0.3547	0.05126	0.08905	0.3628
dcu-1	0.2048	0.5573	0.4467	0.3307	0.0834	0.0417	0.211	0.1338	0.1813	0.211	0.211	0.2671	0.2092	0.2101	0.2109
dcu-3	0.236	0.0116	0.4344	0.3697	0.1275	0.0737	0.617	0.1364	0.2121	0.341	0.393	0.41	0.3008	0.341	0.5267
dcu-2	0.0841	0.0099	0.1506	0.1247	0.0644	0.0442	0.5354	0.0454	0.0739	0.1846	0.2469	0.257	0.1323	0.1802	0.4185
humb	0.3324	0.0288	0.5432	0.4378	0.1682	0.0957	0.6773	0.1739	0.2565	0.4331	0.486	0.5035	0.3817	0.4282	0.6081
spq	0.1209	0.0161	0.2286	0.1809	0.0834	0.0538	0.5057	0.0704	0.1086	0.2394	0.302	0.2898	0.1808	0.2305	0.4297
uaic	0.0092	0.0224	0.0301	0.018	0.0036	0.0018	0.0118	0.0104	0.0118	0.0118	0.0118	0.0168	0.01155	0.01168	0.01181
ui-2	0.0269	0.0029	0.0784	0.0608	0.0249	0.0157	0.1488	0.0222	0.0342	0.0631	0.0818	0.0898	0.04769	0.0615	0.1192
ui-3	0.0332	0.0033	0.0915	0.068	0.0306	0.0196	0.1778	0.0261	0.0386	0.084	0.1064	0.1081	0.06022	0.07908	0.1462
ui-1	0.0307	0.003	0.0896	0.0645	0.0275	0.0174	0.1557	0.0248	0.0366	0.0733	0.0897	0.0977	0.05512	0.06937	0.1265
uned-1	0.0719	0.0065	0.1347	0.1147	0.0675	0.0426	0.3363	0.0355	0.0608	0.1826	0.2261	0.193	0.1278	0.1703	0.2923
uned-2	0.0851	0.0064	0.1815	0.1421	0.067	0.0416	0.3337	0.0508	0.0798	0.1786	0.2223	0.2069	0.1342	0.1713	0.2899
uned-3	0.0797	0.0063	0.1703	0.1388	0.0655	0.0405	0.329	0.048	0.0796	0.1747	0.2143	0.1994	0.1287	0.1651	0.2852
uned-4	0.0854	0.0065	0.1807	0.1429	0.0673	0.0416	0.3354	0.0504	0.08	0.1789	0.2229	0.2078	0.1349	0.1717	0.2906
uned-5	0.0803	0.0064	0.171	0.1382	0.0652	0.0405	0.3303	0.0484	0.0789	0.1727	0.2139	0.2004	0.1293	0.1654	0.2858
uned-6	0.0691	0.0065	0.129	0.1081	0.0682	0.0435	0.3359	0.0338	0.0576	0.1842	0.23	0.1902	0.1262	0.1706	0.2935
uned-7	0.0792	0.0065	0.1633	0.1311	0.0681	0.0439	0.3372	0.0465	0.0738	0.1807	0.2273	0.2014	0.1307	0.1723	0.2933
uned-8	0.071	0.0065	0.1375	0.1125	0.0673	0.0425	0.3357	0.0359	0.0612	0.1813	0.2254	0.1918	0.1264	0.1684	0.2926
run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES

Table 8: Detailed measures for the PAC task, French topic subset

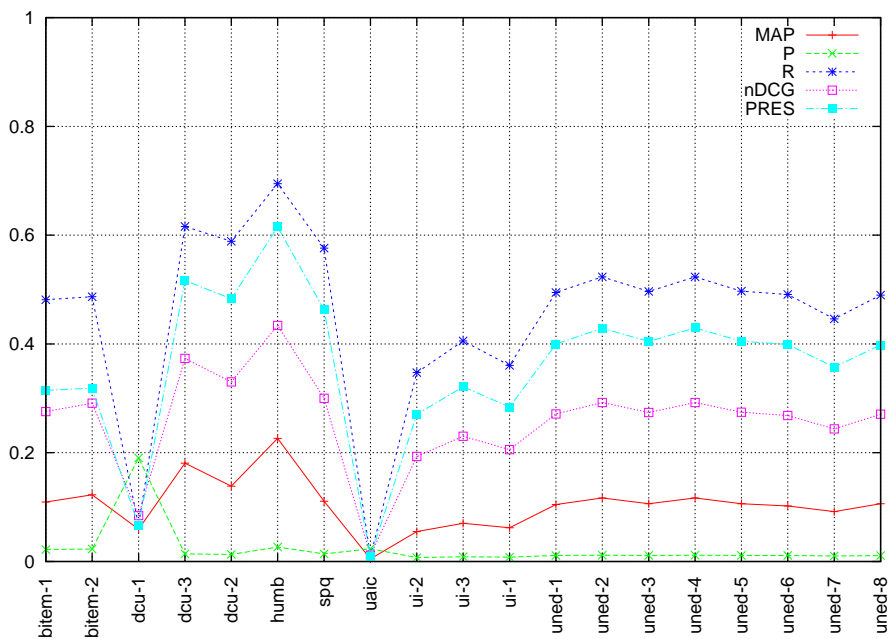| run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES
bitem-1	0.0969	0.0204	0.1776	0.1619	0.0716	0.0449	0.4675	0.0502	0.0969	0.2129	0.2653	0.2543	0.03049	0.05574	0.3152
bitem-2	0.1252	0.0211	0.2507	0.206	0.0787	0.0481	0.4759	0.0705	0.1219	0.2294	0.2805	0.289	0.03158	0.05796	0.323
dcu-1	0.2827	0.5816	0.5254	0.4306	0.1358	0.0679	0.2941	0.1532	0.222	0.2941	0.2941	0.3523	0.29	0.292	0.2939
dcu-3	0.2981	0.0133	0.4687	0.4515	0.1825	0.0998	0.6426	0.1519	0.2554	0.4256	0.4684	0.4701	0.3815	0.4183	0.5703
dcu-2	0.0957	0.0096	0.1716	0.1299	0.0664	0.0445	0.5168	0.0647	0.0924	0.2001	0.2586	0.262	0.1479	0.1916	0.4099
humb	0.3842	0.0284	0.5925	0.503	0.2131	0.1323	0.7608	0.1731	0.2755	0.4919	0.5963	0.5743	0.4229	0.4979	0.6983
spq	0.1185	0.0126	0.2104	0.1724	0.0794	0.0509	0.5607	0.073	0.1052	0.2236	0.2905	0.3033	0.1673	0.2156	0.4428
uaic	0.0217	0.0494	0.0627	0.0396	0.0079	0.004	0.0259	0.021	0.0259	0.0259	0.0259	0.0403	0.02539	0.02564	0.02587
ui-2	0.0249	0.003	0.0701	0.053	0.0227	0.0145	0.1505	0.0202	0.0289	0.0635	0.0777	0.0864	0.04505	0.05824	0.1185
ui-3	0.0324	0.0032	0.0955	0.0657	0.029	0.0188	0.1621	0.0279	0.0382	0.0759	0.0965	0.0996	0.05613	0.07356	0.1318
ui-1	0.0333	0.0031	0.0881	0.0612	0.0284	0.0186	0.1556	0.0275	0.0398	0.0765	0.097	0.0992	0.05535	0.07325	0.1304
uned-1	0.0527	0.0055	0.1299	0.097	0.044	0.0283	0.255	0.0391	0.0548	0.1008	0.1281	0.1499	0.08059	0.09988	0.2078
uned-2	0.0649	0.0057	0.1522	0.1104	0.0531	0.034	0.2581	0.0482	0.0599	0.1282	0.1657	0.1709	0.09824	0.1258	0.2242
uned-3	0.0618	0.0055	0.1478	0.109	0.0515	0.0335	0.2525	0.0459	0.0581	0.1241	0.162	0.1644	0.0951	0.1223	0.2184
uned-4	0.0664	0.0057	0.1612	0.1149	0.0534	0.0338	0.2584	0.0503	0.0622	0.1286	0.1652	0.1725	0.09926	0.1263	0.2246
uned-5	0.0623	0.0055	0.1493	0.1134	0.0518	0.0335	0.2526	0.0462	0.0607	0.1247	0.1647	0.165	0.09571	0.1229	0.2186
uned-6	0.0513	0.0056	0.1269	0.0813	0.0419	0.0278	0.258	0.041	0.0495	0.1002	0.1341	0.1508	0.07725	0.0997	0.2106
uned-7	0.0353	0.0054	0.0687	0.0567	0.0346	0.0242	0.2521	0.024	0.0411	0.0803	0.1082	0.1301	0.05929	0.07832	0.1972
uned-8	0.0543	0.0055	0.1284	0.0903	0.041	0.0287	0.2541	0.0399	0.0535	0.0966	0.1303	0.1512	0.07685	0.0984	0.206
run id	MAP	P	P5	P10	P50	P100	R	R5	R10	R50	R100	nDCG	PRES50	PRES100	PRES

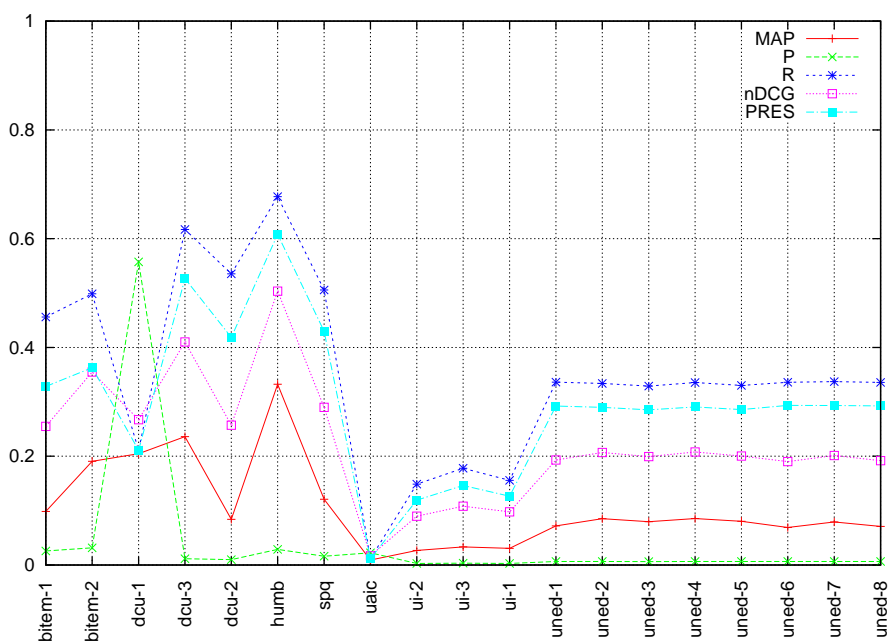Figure 3: Graphical representation of the evaluation results for the English topic subset.

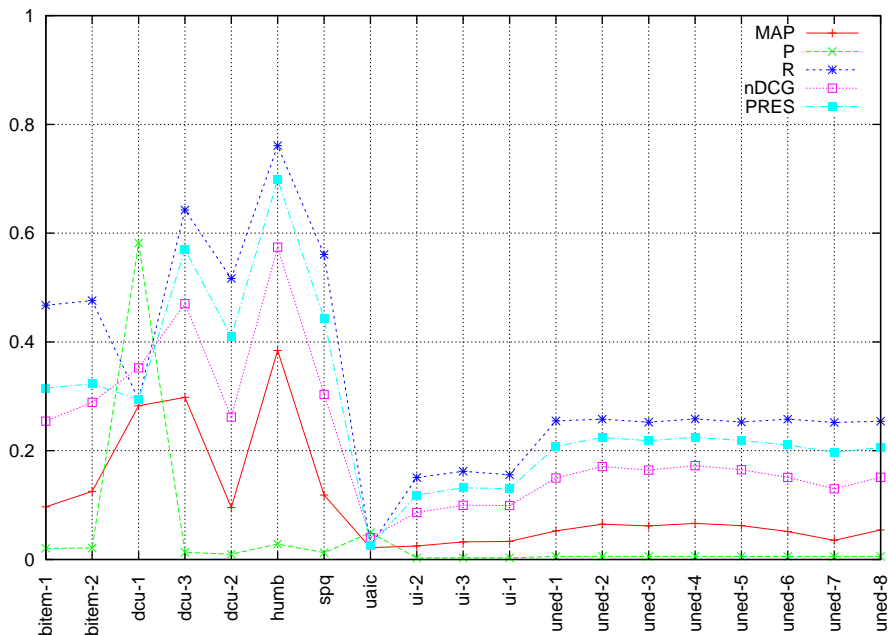Figure 4: Graphical representation of the evaluation results for the German topic subset.

Figure 5: Graphical representation of the evaluation results for the French topic subset.

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