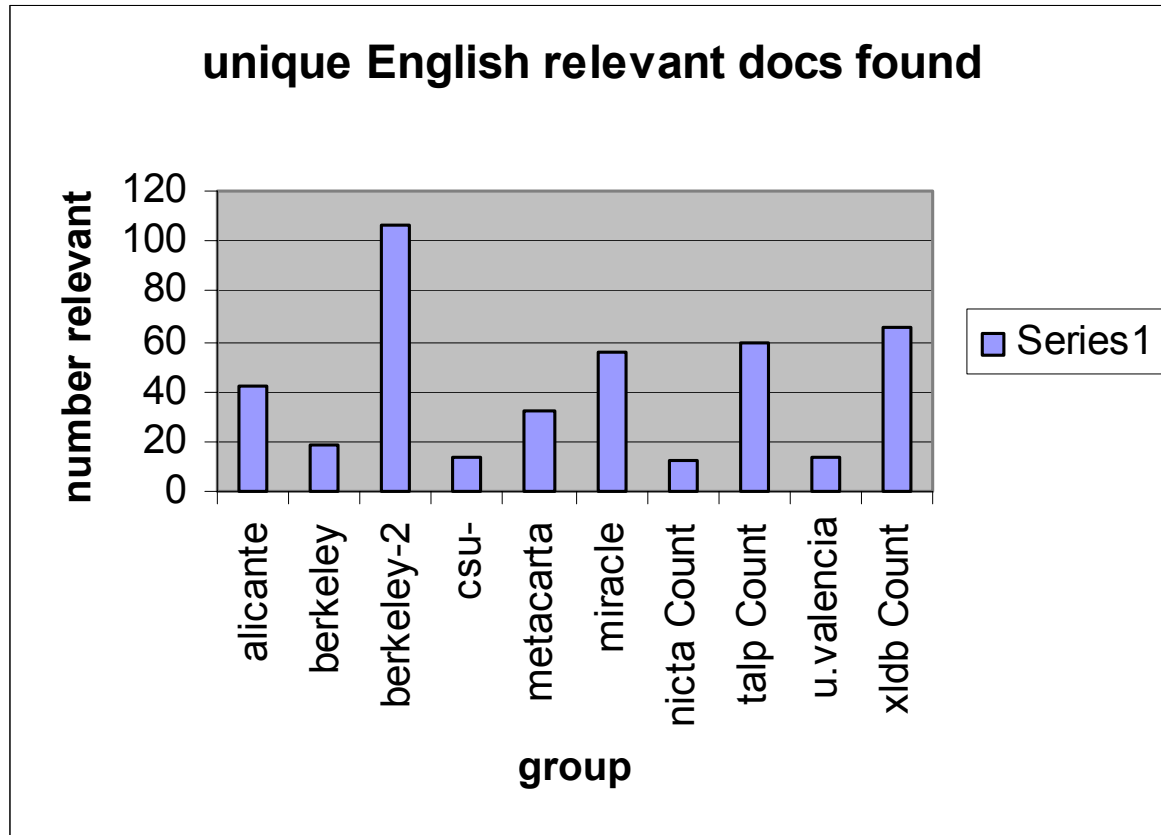


Participating Group	Mono E N	Mono D E	Bi ->EN	Bi ->DE	Total
California State University, San Marcos	2	0	2	0	4
Grupo XLDB (Universidade de Lisboa) *	6	4	4	0	14
Linguatca (Portugal and Norway)	0	0	0	0	0
Linguit GmbH. (Germany)	16	0	0	0	16
MetaCarta Inc. *	2	0	0	0	2
MIRACLE (Universidad Politécnica de Madrid)	5	5	0	0	10
NICTA, University of Melbourne	4	0	0	0	4
TALP Research Center (Universitat Politècnica de Catalunya)	4	0	0	0	4
Universidad Politécnica de Valencia	2	0	0	0	2
University of Alicante	5	4	12	13	34
University of California, Berkeley (Berkeley 1)	3	3	2	2	10
University of California, Berkeley (Berkeley 2)	4	4	2	2	12
University of Hagen (FernUniversität in Hagen) *	0	5	0	0	5
Total Submitted Runs	53	25	22	17	117
Number of Groups Participating in Task	11	6	5	3	12

GeoCLEF Overview – Approaches

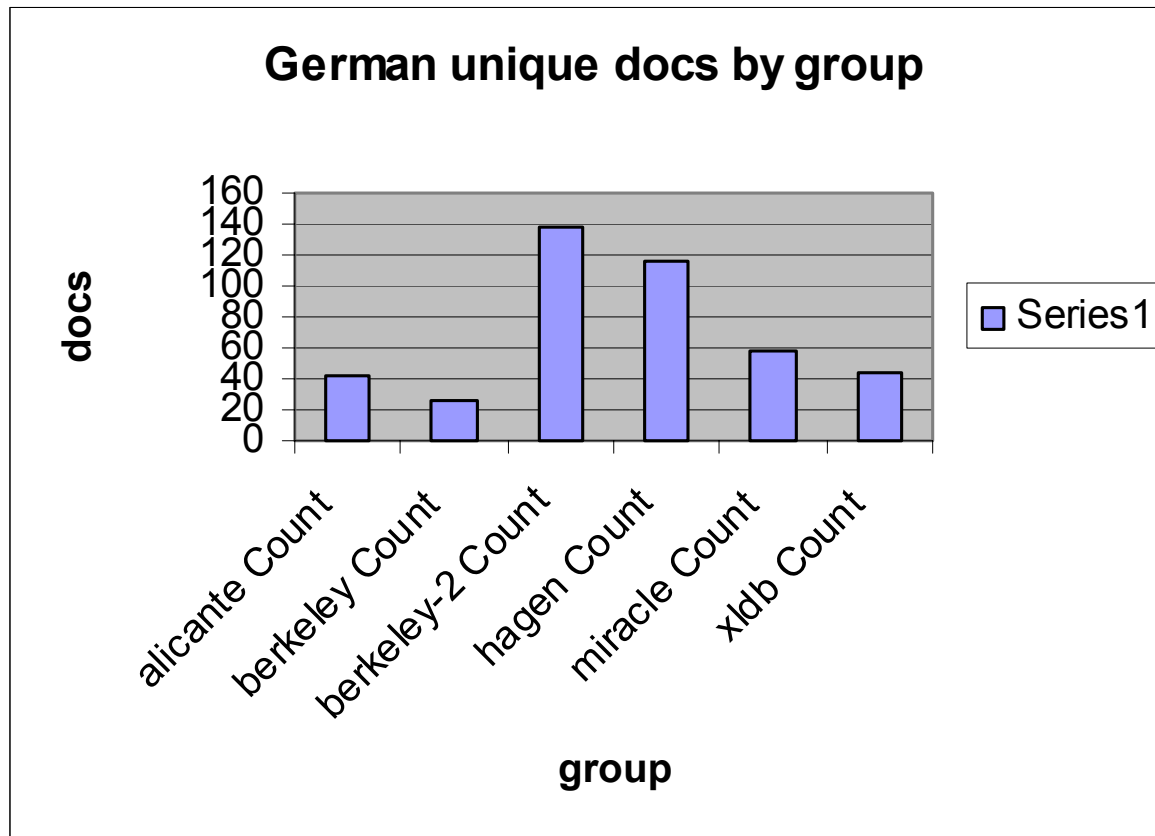
- **Ad-hoc techniques (blind feedback, German word decomposing)**
- **Question-answering modules**
- **Gazetteer construction (GNIS, World Gazetteer)**
- **Geoname Named Entity Extraction**
- **Term expansion using Wordnet, geographic thesauri**
- **Toponym resolution**
- **NLP – Geofiltering predicates**
- **Latitude-longitude assignment**
- **Gazetteer based query expansion**

GeoCLEF Overview – Unique docs found by group



- 418 unique relevant English docs out of 1028 total English relevant(40.7%)

GeoCLEF Overview – Unique docs found by group



- **427 unique relevant German docs out of 785 total German relevant (76.4%)**

GeoCLEF Overview – Results

Best monolingual-E-run	MAP	Best monolingual-DE-run	MAP
berkeley-2_BKGeoE1	0.3936	berkeley-2_BKGeoD3	0.2042
csu-sanmarcos_csusm1	0.3613	alicante_irua-de-titledescgeotags	0.1227
alicante_irua-en-ner	0.3495	miracle_GCdeNOR	0.1163
berkeley_BERK1MLEN LOC03	0.2924	xldb_XLDBDEManTDGKBm 3	0.1123
miracle_GCenNOR	0.2653	hagen_FUHo14td	0.1053
nicta_i2d2Run1	0.2514	berkeley_BERK1MLDELOC0 2	0.0535
linguit_LTITLE	0.2362		
xldb_XLDBENManTDL	0.2253		
talp_geotalpIR4	0.2231		
metacarta_run0	0.1496		
u.valencia_dsic_gc052	0.1464		

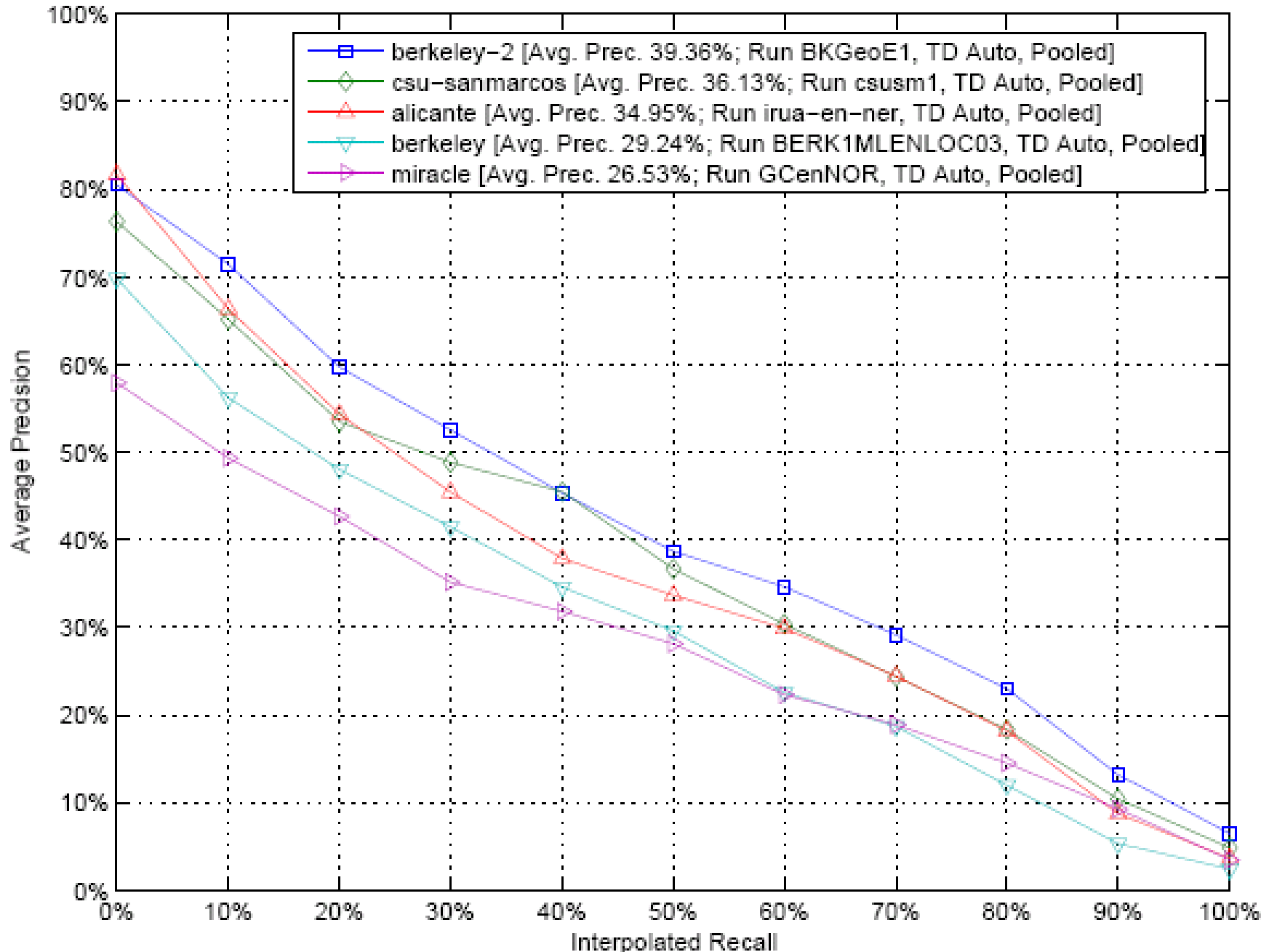
GeoCLEF Results – Required English TD Retrieval

Recall	CSUSM*	Berkeley2	Alicante	Berkeley	NICTA
0.0	0.7634	0.7899	0.7889	0.6976	0.6680
0.1	0.6514	0.6545	0.6341	0.5222	0.5628
0.2	0.5348	0.5185	0.4972	0.4321	0.4209
0.3	0.4883	0.4584	0.4315	0.3884	0.3456
0.4	0.4549	0.3884	0.3776	0.3435	0.2747
0.5	0.3669	0.3562	0.3258	0.2783	0.2217
0.6	0.3039	0.2967	0.2728	0.2221	0.1715
0.7	0.2439	0.2563	0.2072	0.1877	0.1338
0.8	0.1834	0.1963	0.1591	0.1168	0.0908
0.9	0.104	0.1169	0.0701	0.0525	0.0624
1.0	0.0484	0.0603	0.0314	0.0194	0.0272
MAP	0.3613	0.3528	0.3255*	0.2794*	0.2514*

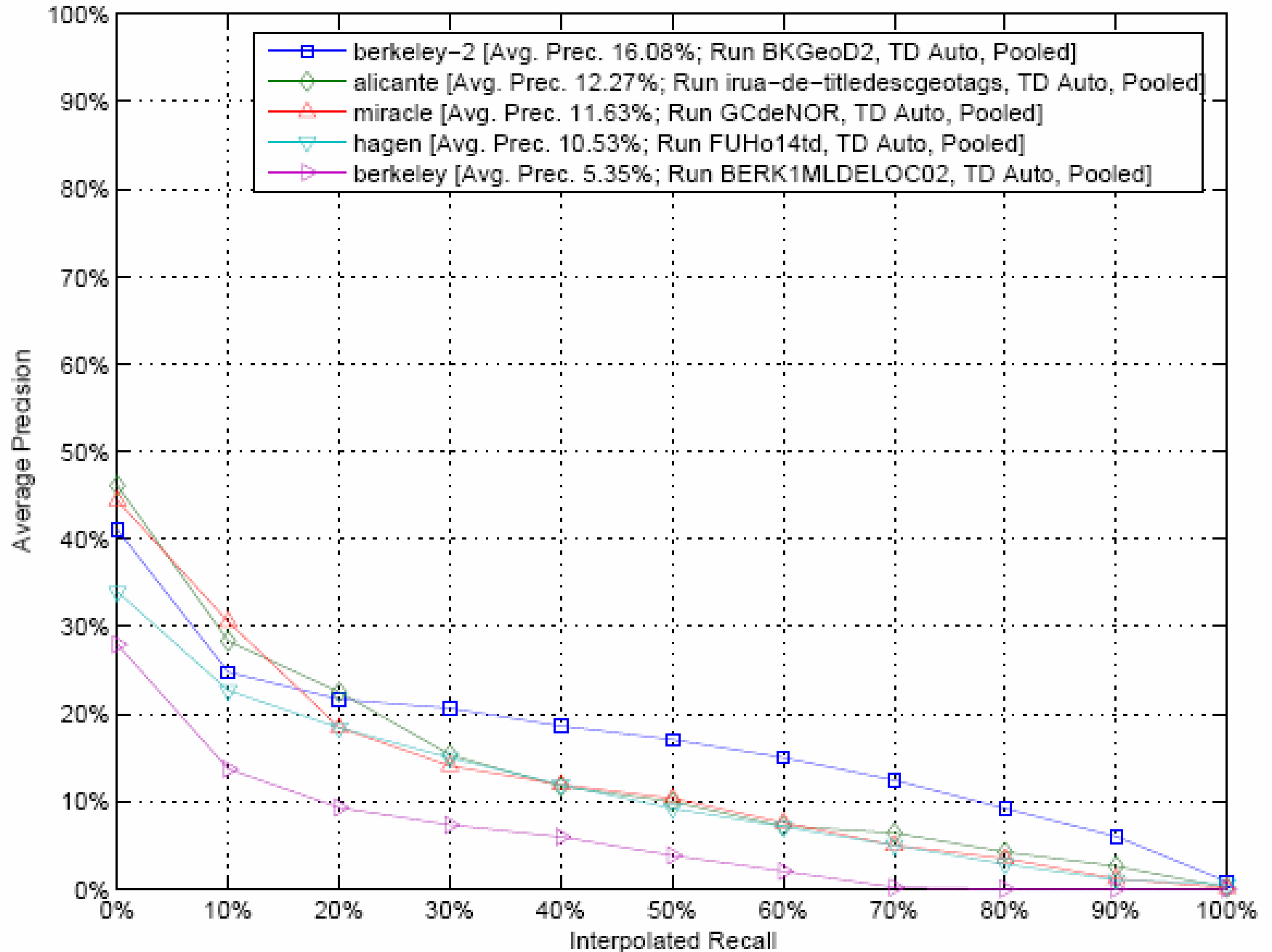
20-Oct-05

*CSUSM run is a statistically significant improvement over this run using a paired t-test at 5% probability level

CLEF 2005 – Top 5 participants of GeoCLEF Monolingual EN – Interpolated Recall vs Average Precision



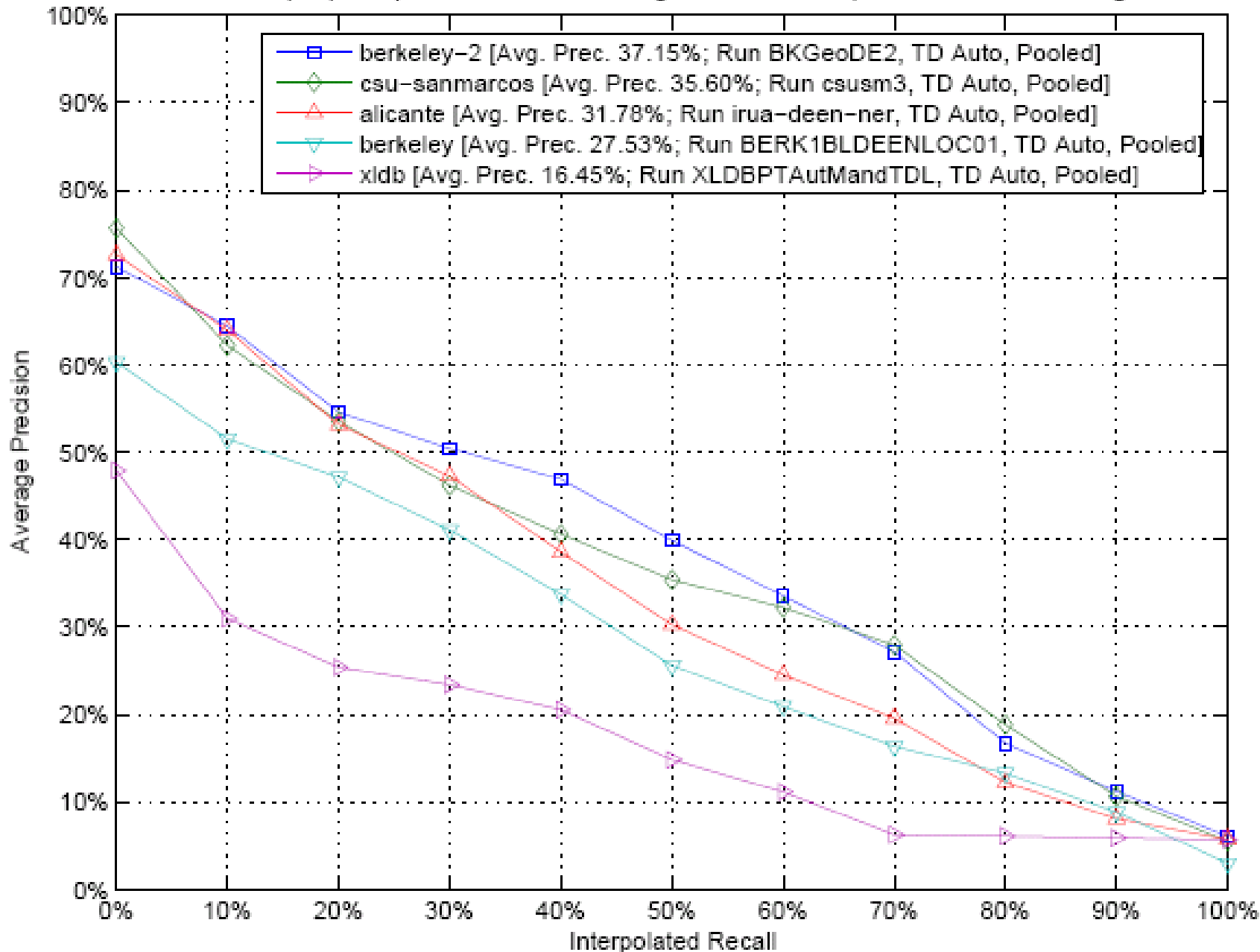
CLEF 2005 – Top 5 participants of GeoCLEF Monolingual DE – Interpolated Recall vs Average Precision



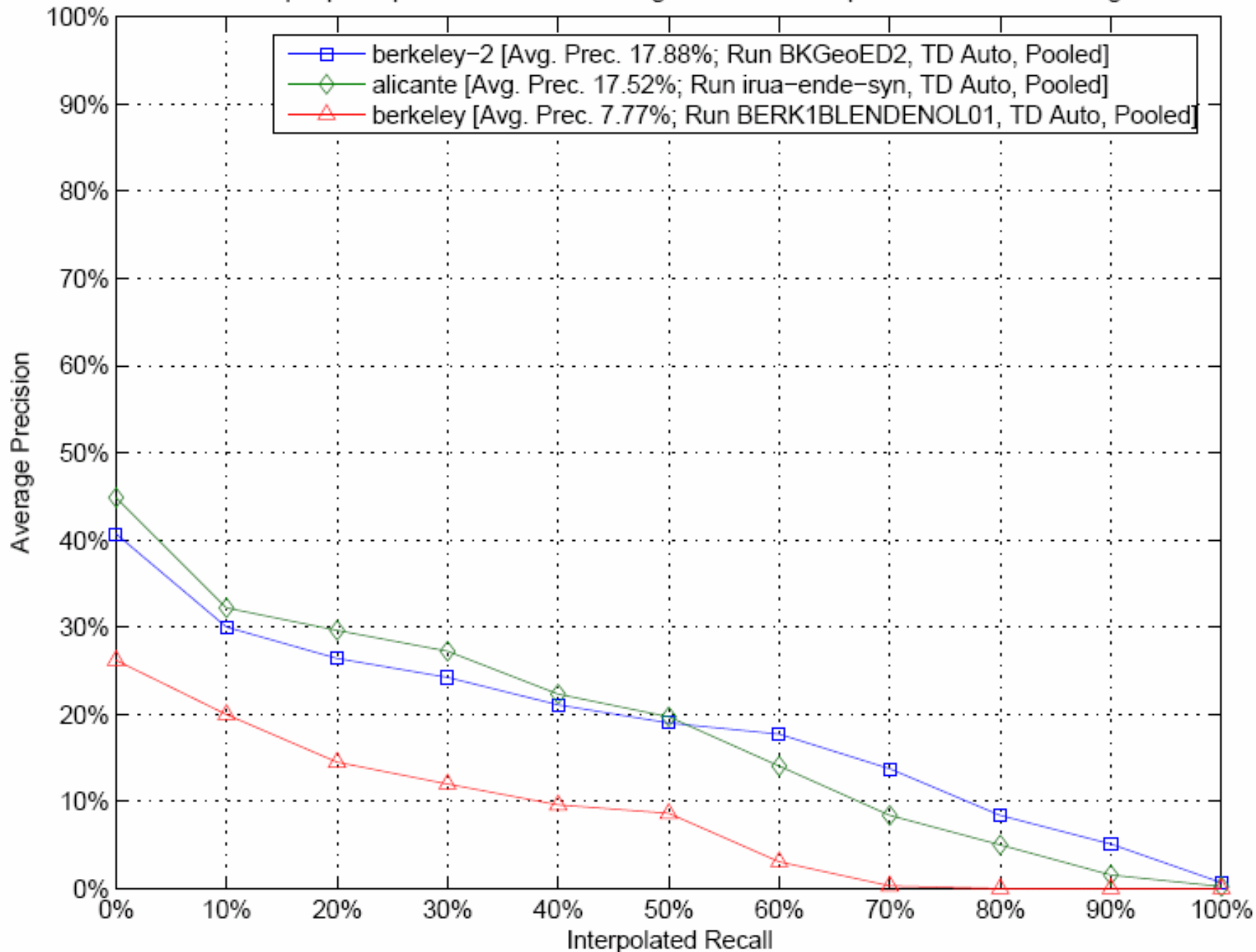
GeoCLEF Results – Best Bilingual

Best bilingual-X→EN-run	MAP	Best bilingual-X→DE-run	MAP
berkeley-2_BKGeoDE2	0.3715	berkeley-2_BKGeoED2	0.1788
csu-sanmarcos_csusm3	0.3560	alicante_irua-ende-syn	0.1752
alicante_irua-deen-ner	0.3178	berkeley_BERK1BLENDENOL 01	0.0777
berkeley_BERK1BLDEENLO C01	0.2753		

CLEF 2005 - Top 5 participants of GeoCLEF Bilingual X2EN - Interpolated Recall vs Average Precision



CLEF 2005 – Top 3 participants of GeoCLEF Bilingual X2DE – Interpolated Recall vs Average Precision



GeoCLEF Results – Required TD+GEO Retrieval

Recall	Berkeley2*	Alicante	CSUSM	Berkeley	Miracle
0.0	0.8049	0.7856	0.7017	0.6981	0.5792
0.1	0.7144	0.6594	0.5822	0.5627	0.4932
0.2	0.5971	0.5318	0.4612	0.4804	0.4266
0.3	0.5256	0.4675	0.4204	0.4149	0.3516
0.4	0.4534	0.4138	0.3803	0.346	0.3184
0.5	0.3868	0.3580	0.2937	0.296	0.2815
0.6	0.3464	0.2924	0.2293	0.2257	0.2231
0.7	0.2913	0.2342	0.1974	0.1869	0.1889
0.8	0.2301	0.1779	0.1451	0.1198	0.1450
0.9	0.1318	0.0823	0.1084	0.0534	0.0928
1.0	0.0647	0.0317	0.0281	0.0243	0.0344
MAP	0.3937	0.3471	0.3032*	0.2924*	0.2653*

*Berkeley2 run is a statistically significant improvement using a paired t-test 1% probability level

GeoCLEF Overview – Participating Groups

Best bilingual-X→EN-run	MAP	Best bilingual-X→DE-run	MAP
berkeley-2_BKGeoDE2	0.3715	berkeley-2_BKGeoED2	0.1788
csu-sanmarcos_csusm3	0.3560	alicante_irua-ende-syn	0.1752
alicante_irua-deen-ner	0.3178	berkeley_ BERK1BLENDENOL01	0.0777
berkeley_ BERK1BLDEENLOC01	0.2753		

GeoCLEF Overview – Conclusions and Discussion

- Geographic keys and operators improve retrieval (but not by much)
- German GIR **seems** more difficult than English GIR.
 - Are the resources less available for German?
 - Or were the topics just more English news oriented (walking holidays in Scotland)?
- Best results achieved by standard ad-hoc approaches → **we aren't defining the task correctly.**
- Do we need more geographic specificity?
- Do we need more geographic challenge?
- **Are we using the correct evaluation?** Should the result (for, say, Golf Tournaments in Europe) be a list of cities (where golf tournaments are taking place)? Evaluation of completeness of list and how many correct items in the list
- Similar to the CONLL challenge of 2002-2003
- See paper by Paul Clough and Mark Sanderson

GeoCLEF Overview – Future Directions

- GeoCLEF attracted a lot of interest and runs → we should continue next year, BUT
- We have to understand the true task and the appropriate evaluation
- More languages (**Portuguese and Spanish**)?
 - Should we drop German?
- Include a **multilingual GIR** retrieval task?
- **Increase the geographic challenge** (find stories about places within 200 kilometers of Vienna, what rivers run through Koblenz Germany)
- **Do we have the resources** to expand, or even to continue at the same level?

GeoCLEF Overview – Acknowledgments

- **University of Sheffield – Paul Clough & Hideo Joho (webmaster) & Mark Sanderson (topic development, English relevance assessment)**
 - **University of California, Berkeley – Fred Gey & Ray Larson (topic development, English relevance assessment), Vivien Petras (topic development, German topic translation, German relevance Assessment)**
 - **Linguatca – Diana Santos, Paulo Rocho (Portuguese Topic translation)**
 - **University of Alicante – Andres Montoyo (Spanish Topic translation)**
 - **Michael Kluck's student Marco (German relevance assessment)**
- and (last but not least)**
- **Giorgio Di Nunzio and Nicola Ferro at University of Padua for supplying so much help on short notice**