Overview of NTCIR-9

Tetsuya Sakai
Hideo Joho
(NTCIR Program Chairs)

December 7, 2011@NII

TALK OUTLINE

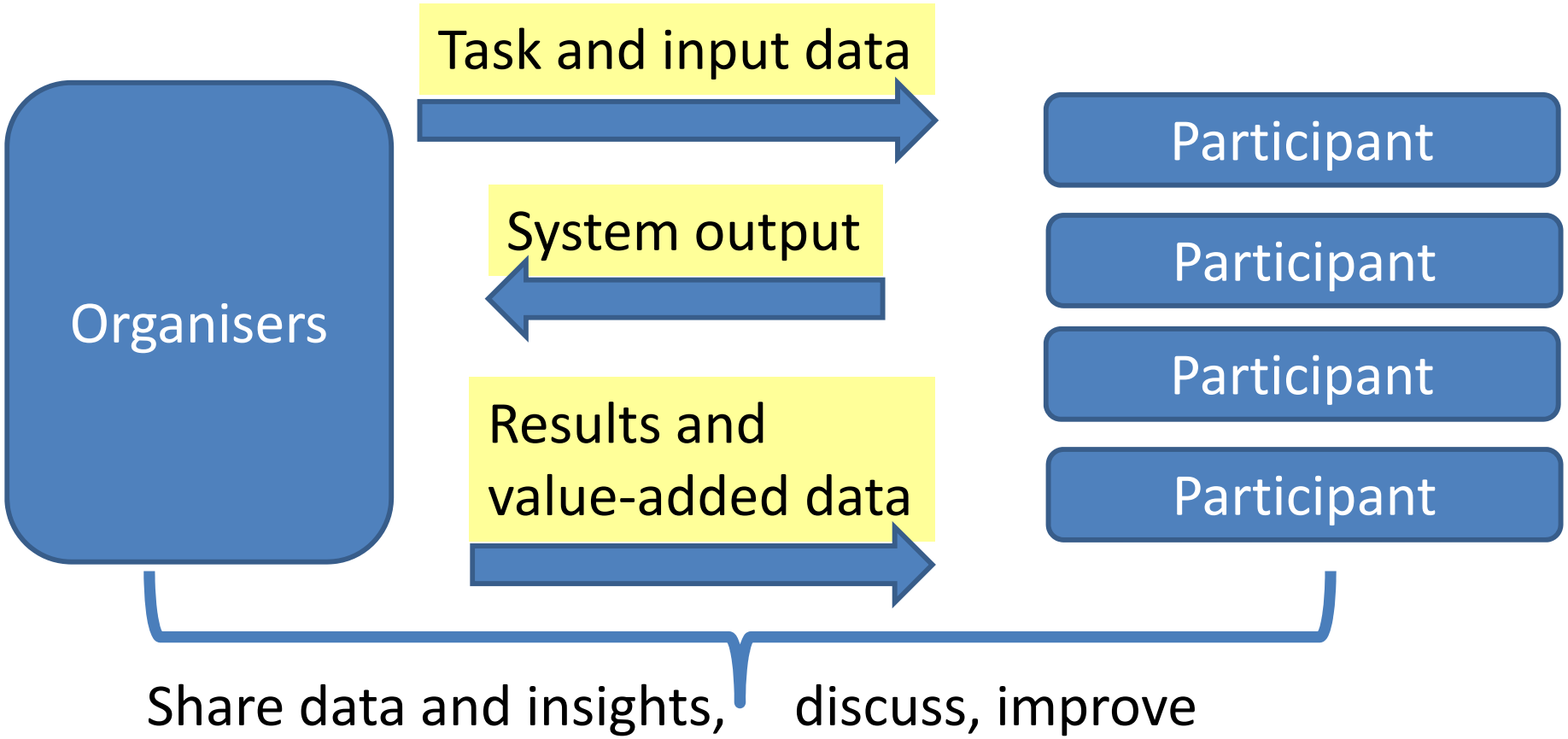
- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

Evaluation Forums

- Research teams gather up to solve shared problems; submit system output before deadline
- Systems evaluated and compared across teams



Why Evaluation Forums?

- Compete and collaborate, accelerate research
- Build large-scale test collections through collective efforts e.g. *pooling*
- Foster interdisciplinary research towards grand challenges, build new research communities

NTCIR=NII Test Collection for Information Retrieval systems

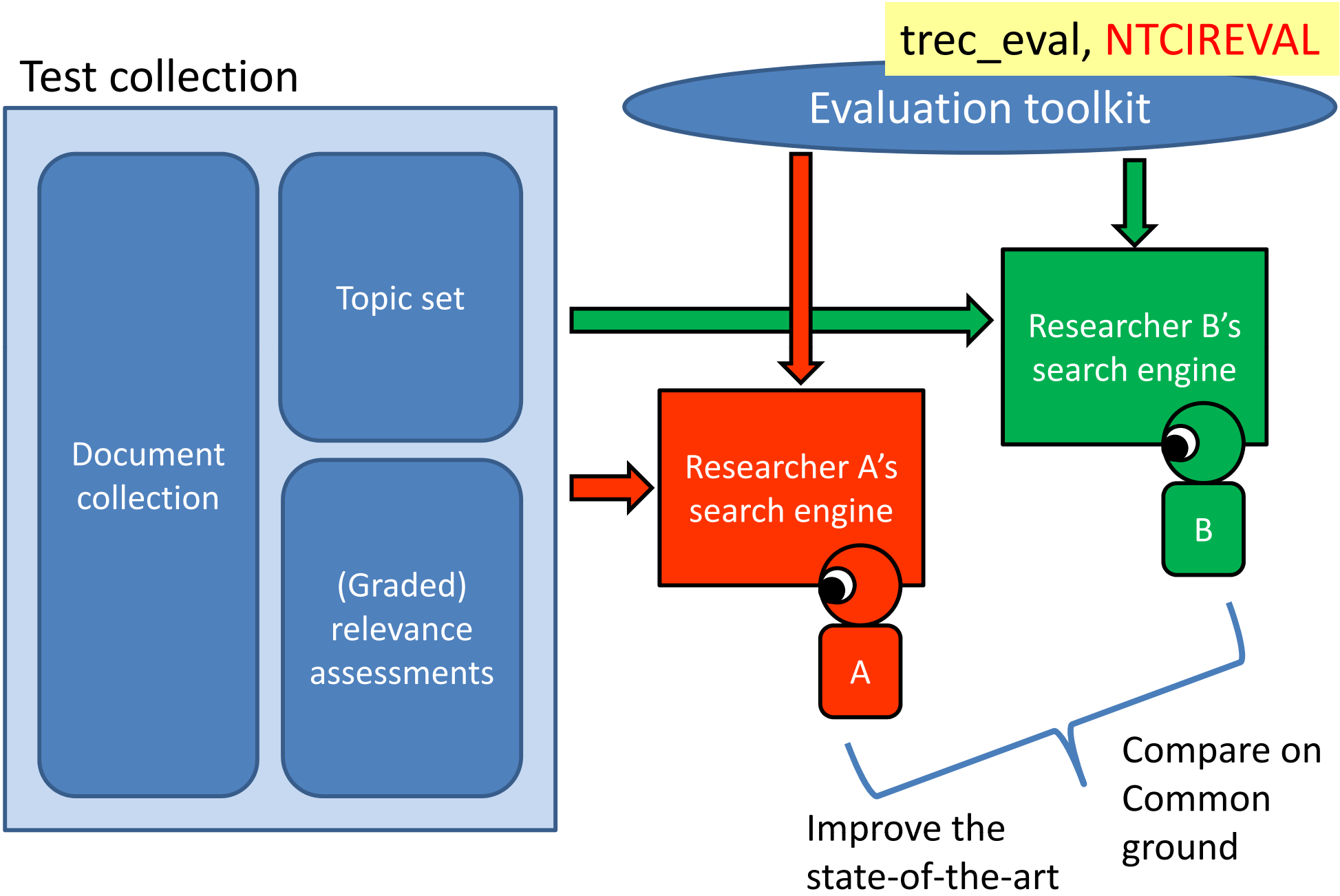
NTCIR=NII Testbeds and Communities for Information access Research?

Information Retrieval Evaluation Forums

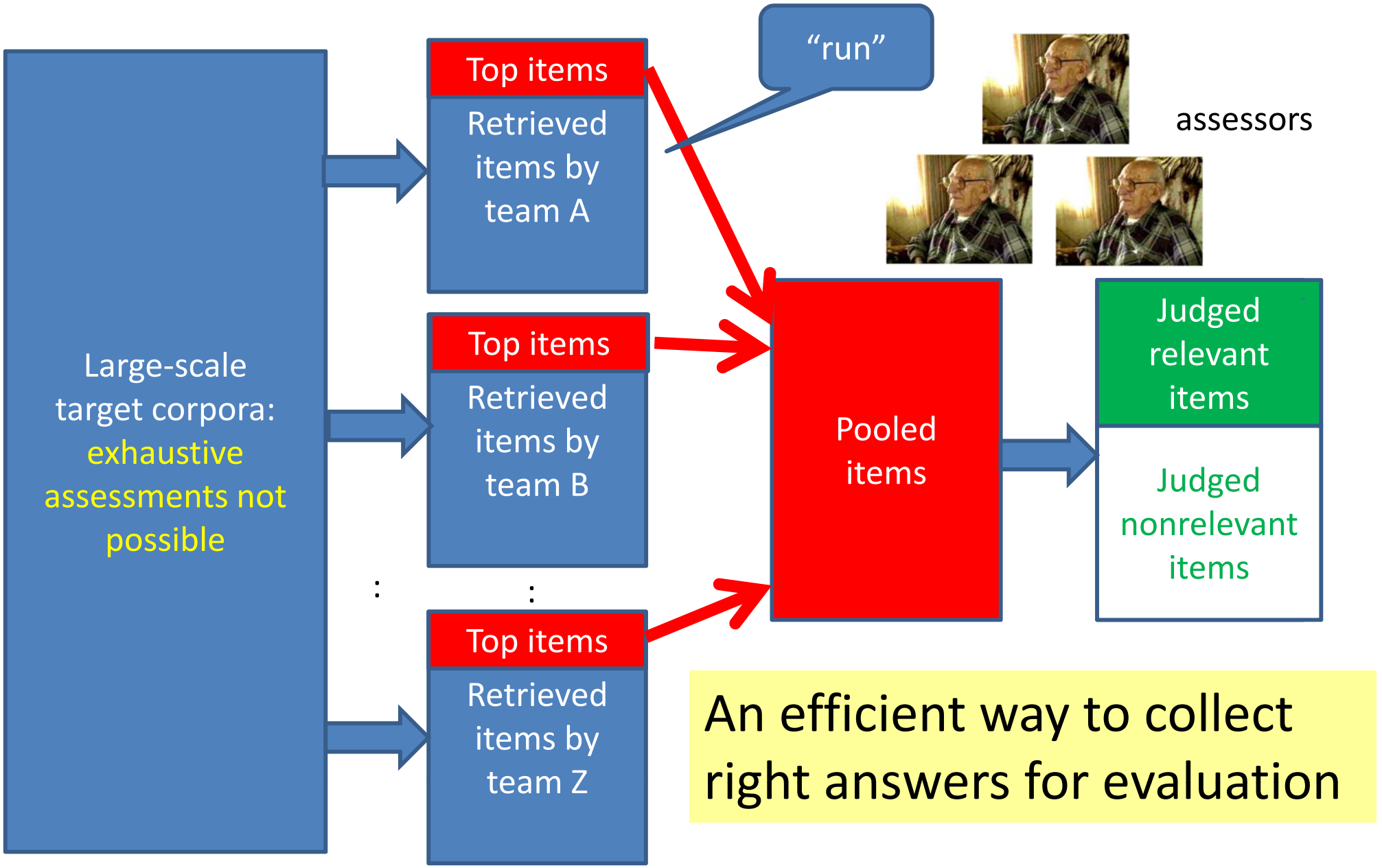
- TREC (Text Retrieval Conference) 1992-
- NTCIR 1999- [sesquiannual]
- CLEF (Cross-Language Evaluation Forum) 2000-
- INEX (Initiative for the evaluation of XML retrieval) 2002-
- TRECVID 2003-
- FIRE (Forum for IR Evaluation) 2008-
- MediaEval (Benchmarking Initiative for Multimedia Evaluation) 2010-

[not exhaustive]

Jargon: Test Collection



Jargon: Pooling



An efficient way to collect right answers for evaluation

Jargon: MAP


NII
Imperial Palace
Tokyo station
千代田区役所
吉田茂像
北の丸国立近代美術館
千鳥ヶ淵戦没者墓苑
国立近代美術館工芸館
官町
竹橋
一ツ橋
神田署
小谷歯科医院
気象庁
東京国税局
神田橋
北桔橋門
天守眼跡
天神濠
皇居東御苑
平川濠
千代田
吹上御所
皇居
蓮池濠
江戸城跡皇居東御苑
百人番所
宮内庁病院
大手門
桔梗門
富士見櫓
宮内庁
下道灌濠
和田倉濠
和田倉噴水公園
蛤濠
坂下門
新宮殿
宮中三殿
二重橋濠
二重橋
皇居外苑
皇居正門
内堀通り
馬場先濠
新丸の内ビル
丸の内ビル
丸の内MY PLAZA
東京駅
グランスタ
500 フィート
100 m
© 2011 Microsoft Corporation © 2010 Zenrin
© 2011 Microsoft | プライバシー | 使用条件 | 広告について | ヘルプ | ご意見ご感想

Query:
(I want to eat) sushi

Jargon: MAP

Mean
Average
Precision

寿司 - Wikipedia
語源説・種類・地方の**寿司**・歴史
寿司（**すし**、鮨、鮓、寿斗、寿し、**壽司**）と呼ばれる食品は、酢飯と主に魚介類を組み合わせた日本料理である。大別すると、生鮮魚介を用いた「早鮨（早ずし）」と、魚介類に米を加えて乳酸発酵させた「なれ鮨（なれずし）」に区分される。そのなかでも代表的な**寿司**は前者の握り**寿司**（江戸前 **寿司**）であり、すでに“sushi”で通じるほど世界中に…
ja.wikipedia.org/wiki/**寿司**・スパムとして報告

元気寿司グループ | 回転寿司のパイオニア
11/09/14 千両・廻鮮日本海【秋期間限定メニュー】販売中！！11/09/01 **すし**おんど【秋期間限定メニュー】販売中！！9月1日（木)より 11/09/01 元気寿司【秋期間限定メニュー】販売中！！9月1日（木…
www.genkisushi.co.jp/index.php・スパムとして報告

かっぱ**寿司**へようこそ!!
かっぱ**寿司**で使用している国産の魚介類産地について かっぱ**寿司**で使用している魚介類の産地につきましては、「原産地情報」ページで日々最新情報をご提供しております。厳選素材の美味しさをお楽しみください「秋のデカ旨」開催中！
www.kappa-create.co.jp・スパムとして報告

寿司(鮨)ランキング [食べログ]
全国にある**寿司**(鮨)のお店32,640件を一般ユーザーの口コミをもとに集計した様々なランキングから探すことができます。美味しい**寿司**(鮨)のお店や、人気の**寿司**(鮨)のお店が簡単に見つかります！
r.tabelog.com/sushi・スパムとして報告

東京の**寿司** マグロが自慢【**すし**ざんまい】tsukiji sushi-zanmai
お**寿司**といえば『**すし**ざんまい』！！江戸前**寿司**の本場、東京で美味しい**寿司**が食べたいそんなあなた、『**すし**ざんまい』へお越しください！！tsukiji sushi-zanmai …《What's NEW》特選おせち【三段重】予約申込受付中！11/13（日…
www.kiyomura.co.jp・スパムとして報告

寿司 レシピ 689品 [クックパッド] 簡単おいしいみんなのレシピが109万品
人気の**寿司**レシピ（作り方）が689品集まった**寿司**コミュニティ。毎日更新の**寿司**レシピランキング …んなが料理した写真付きレポートなどが充実している。… **寿司** 推薦レシピ：689 品 つくれ …件 手作り**寿司**のレシピ。お**寿司**のアイディア …
…tegory/165・スパムとして報告

User's stopping probability: uniform

Precision@2=1/2

Precision@3=2/3

Precision@4=3/4

Precision@5=4/5

$$AP = \frac{\sum_{r} \text{Isrelevant}(r) * \text{Prec@r}}{\#\text{all relevant docs}}$$

Jargon: nDCG

normalised
Discounted
Cumulative
Gain

System's output	Discounted Gain
Nonrelevant	
Relevant	2/log(2+1)
Relevant	
Partially relevant	1/log(4+1)

Ideal output	Discounted Gain
Highly relevant	3
Relevant	2/log(2+1)
Relevant	2/log(3+1)
Partially relevant	1/log(4+1)

$$\text{nDCG} = \frac{\sum \text{System's discounted gains}}{\sum \text{Ideal discounted gains}}$$

Unlike AP,
nDCG can utilise
graded relevance assessments
(widely used in Web search
evaluation)

NTCIR history!

		1999	2001	2002	2004	2005	2007	2008	2010	2011
		NTCIR-1	NTCIR-2	NTCIR-3	NTCIR-4	NTCIR-5	NTCIR-6	NTCIR-7	NTCIR-8	NTCIR-9
TMREC	Automatic Term Recognition and Role Analysis	9								
Ad hoc/Crosslingual IR(1)> Chinese/English/Japanese IR(2)->CLIR(3-6)	Crosslingual IR	28	30	20	26	25	22			
TSC	Text Summarization Challenge		9	8	9					
WEB	Web Retrieval			7	11	7				
QAC	Question Answering Challenge			16	18	7	8			
PATENT	Patent Retrieval (and Classification)			10	10	13	12			
MuST	Multimodal Summarization for Trend Information					13	15	13		
Opinion(6)->MOAT(7,8)	(Multilingual) Opinon Analysis						12	21	16	
CLQA(5,6)->CCLQA@ACLIA(7,8)	(Complex) Crosslingual Question Answering					14	12	9	6	
IR4QA@ACLIA	IR for Question Answering							12	12	
CQA	Community Question Answering								4	
PAT-MN	Patent Mining							12	11	
PAT-MT(7,8)->PatentMT(9)	Patent Translation							15	8	21
GeoTime	Geotemporal IR								13	12
INTENT/1CLICK	Intent/One Click Access									20
VisEx	Interactive Visual Exploration									4
RITE	Recognizing Inference in Text									24
CrossLink	Crosslingual Link Discovery									11
SpokenDoc	IR for Spoken Documents									10

Emphasis on multilingual and Asian-language information access from the very beginning

All NTCIR/EVIA papers are available online!

NTCIR (NII Test Collection for IR Systems) Project | Related URL's | Contact Information | NII |

NTCIR

Search

Search

- HOME
- About NTCIR
- WorkShop
  - NTCIR-9
  - NTCIR-8
  - NTCIR-7
  - NTCIR-6
  - NTCIR-5
  - NTCIR-4
  - NTCIR-3
  - NTCIR-2
  - NTCIR-1

NTCIR Project
Publications/Online Proceedings

[Japanese]

All papers published at NTCIR are unrefereed workshop papers.
(Exceptions are the refereed papers presented at EVIA, a satellite workshop of NTCIR and Open Submission Sessions of the NTCIR-4 and NTCIR-5 Meeting.)

Online Proceedings

NTCIR WORKSHOP 1: Online Proceedings
NTCIR WORKSHOP 2: Online Proceedings
NTCIR WORKSHOP 3: Online Proceedings
NTCIR WORKSHOP 4: Online Proceedings || Evaluation Results || Working Notes & Presentations
NTCIR WORKSHOP 5: Online Proceedings, Evaluation Results
NTCIR WORKSHOP 6: Online Proceedings, Evaluation Results
NTCIR WORKSHOP 7: Online Proceedings, Evaluation Results
NTCIR WORKSHOP 8: Online Proceedings, Evaluation Results

Lots of NTCIR test collections are available for free! (Sign a user agreement etc.)

3			CLIR						Retrieval	QA		SUMM	WEB	
NTCIR-4	-	-	NTCIR-4 CLIR	-	-	-	-	-	NTCIR-4 PATENT Retrieval	NTCIR-4 QA	-	NTCIR-4 SUMM	NTCIR-4 WEB	
NTCIR-5	-	-	NTCIR-5 CLIR	NTCIR-5 CLQA	-	-	-	-	NTCIR-5 PATENT Retrieval/ classifi-cation	NTCIR-5 QA	-	-	NTCIR-5 WEB	
NTCIR-6	-	-	NTCIR-6 CLIR	NTCIR-6 CLQA	-	-	NTCIR-6 MuST	NTCIR-6 OPINION	NTCIR-6 PATENT Retrieval/ classifi-cation	NTCIR-6 QA	-	-	-	
NTCIR-7	-	-	NTCIR-7 ACLIA		-	-	NTCIR-7 MuST	NTCIR-7 MOAT	NTCIR-7 PATMN	NTCIR-7 PATMT	-	-	-	-
NTCIR-8	-	-	NTCIR-8 ACLIA	NTCIR-8 CQA	NTCIR-8 GeoTime	-	NTCIR-8 MOAT	NTCIR-8 PATMN	NTCIR-8 PATMT Trans-lation/ Evaluation		-	-	-	-

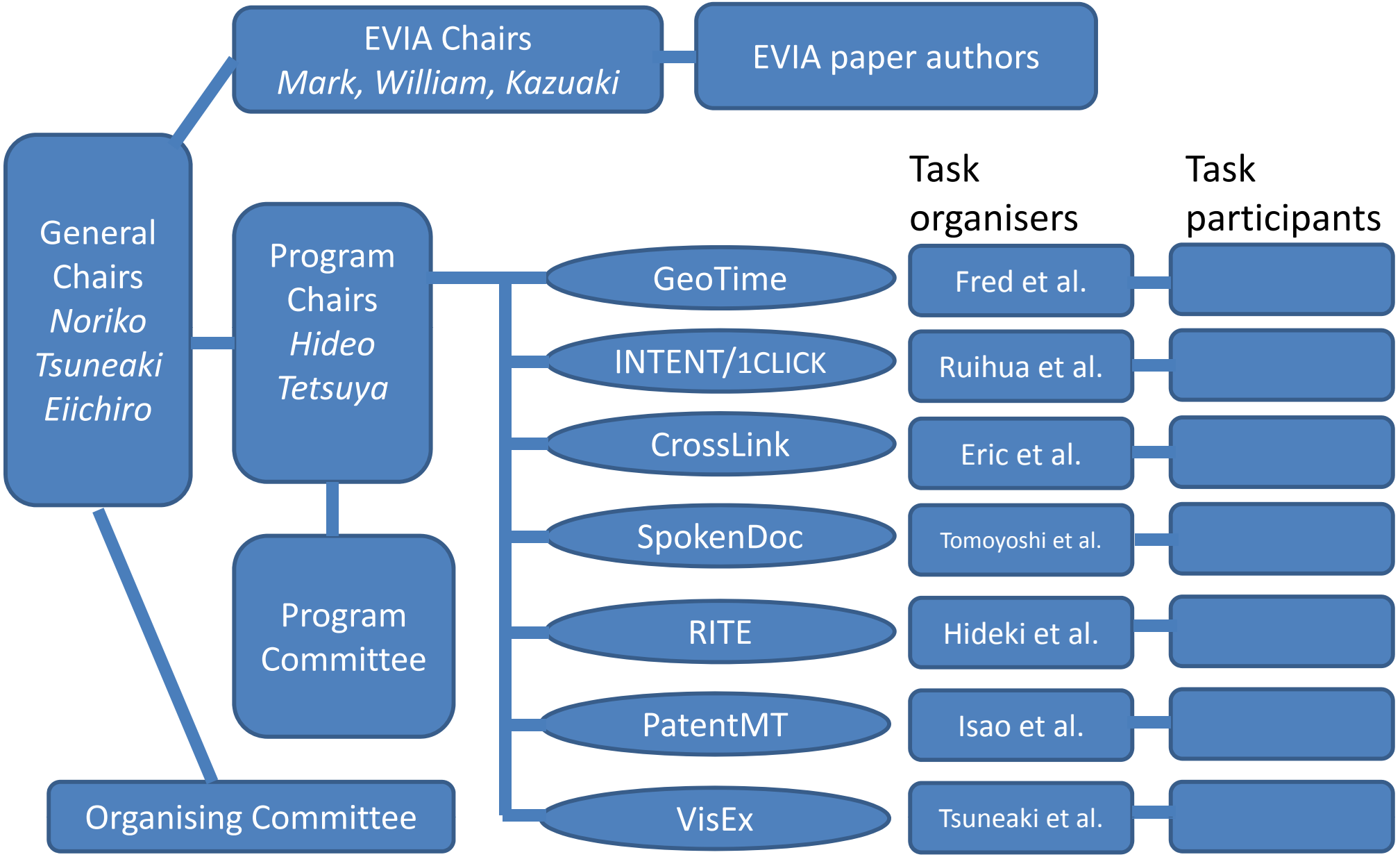
TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

NTCIR-9 People



NTCIR-9 Program at a glance

	Day 1 (Tue)	Day 2 (Wed)	Day 3 (Thu)	Day 4 (Fri)
AM	Per-task breakout sessions	**Overview** Keynote (Junichi Tsujii, MSRA) **PatentMT**	Invited talks (Mark Sanderson and William Webber, Iadh Ounis) **RITE**	**INTENT** **1CLICK**
lunch		PatentMT posters	GeoTime, VisEx, RITE posters	All other tasks' posters
PM	EVIA 2011 - 4 accepted papers - Reports from other eval campaigns - Panel	**GeoTime** **VisEx**	**CrossLink** **SpokenDoc**	Task proposal discussion Wrap up
evening		Banquet		

Keynote and invited talks

Keynote

December 7 Wednesday, 10:30 – 11:30

Title: Natural Language understanding, Semantic-based Information Retrieval and Knowledge Management

by

Junichi Tsujii, Microsoft Research Asia

Invited Talk 1

December 8 Thursday, 9:20–9:55

Title: Principles for Robust Evaluation Infrastructure

by

Mark Sanderson, RMIT University, Melbourne, Australia

and

William Webber, The University of Maryland, USA

Invited Talk 2

December 8 Thursday, 9:55–10:30

Title: Information Retrieval Experimentation with Terrier: Scaling Up in Size and Language Support

by

Iadh Ounis, University of Glasgow, UK

Participating teams by country/region

country/region	#teams
Japan	34
China	23
Taiwan	9
USA	6
Korea	4
Germany	3
Australia	2
Spain	2
UK	2
Canada	1
France	1
India	1
Ireland	1
Portugal	1
TOTAL	90

NTCIR is NOT "Asian TREC"!

Table 1: NTCIR-9 participating teams (Part I).

team ID	organisation	country/region
AKBL	Akiba Laboratory, Toyohashi University of Technology	Japan
ALPS	ALPS Lab. at University of Yamanashi	Japan
ASR	Team ASR, Gifu University	Japan
BBN	Raytheon BBN Technologies	USA
BJTUX	Beijing Jiaotong University	China
BRKLY	University of California, Berkeley	USA
BUAA	Institute of Intelligent Information Processing, Beihang University	China
DBIIR	Information School, Renmin University of China	China
DCU	Dublin City University	Ireland
DUIIS	Daegu University	Korea
EIWA	Yamanashi Eiwa College	Japan
FudanNLP	Fudan University	China
FRDC	Fujitsu R&D Center CO., LTD	China
FX	Fuji Xerox	Japan
GETUA	University of Alicante	Spain
HIT2jointNLPLab	Heilongjiang Institute of Technology / Harbin Institute of Technology	China
HITIR	Research Center for Information Retrieval, Harbin Institute of Technology	China
HITS	Heidelberg Institute for Theoretical Studies	Germany
HU-KB	Hokkaido University	Japan
IASLD,nthuisa	Academia Sinica	Taiwan
IBM	IBM Research - Tokyo / Preferred Infrastructure	Japan
IBM	IBM Research	USA
ICL	Key Laboratory of Computational linguistics, Peking University / Ministry of Education	China
ICRC_HITSZ	Intelligence Computing Research Center, Harbin Institute of Technology Shenzhen Graduate School	China
ICT	Institute of Computing Technology, Chinese Academy of Sciences	China
ICTIR	Institute of Computing Technology (Information Retrieval Group), Chinese Academy of Sciences	China
IDEAS, III_CYUT_NTHU	Institute for Information Industry / Chaoyang University of Technology / National Tsing Hua University	Taiwan
IISR	Yuan Ze University	Taiwan
IMTKU	Information Management, Tamkang University	Taiwan
INESC	National Institute of Electroniques & Computer Systems	Portugal
IRNLP	Korea Advanced Inst. for Science & Technology	Korea
ISCAS	Institute of Software, Chinese Academy of Sciences	China
ISTIC	Institute of Scientific and Technical Information of China	China
IWAPU	Iwate Prefectural University	Japan
JAIST	Japan Advanced Institute of Science and Technology	Japan
JAPIO	Japan Patent Information Organization	Japan
JLTKB	University of Tsukuba	Japan
JUCS	Jadavpur University, Computer Sc. & Engineering	India
KECIR	Shenyang Aerospace University	China
KLE	Pohang University of Science and Technology (POSTECH)	Korea
KMI	The Open University	UK
KOLIS	Keio University, Library Science	Japan
kslab_nut	Nagaoka University of Technology	Japan

Table 2: NTCIR-9 participating teams (Part II).

team ID	organisation	country/region
KSLP	Kyungsung University	Korea
KUIDL	Kyoto University (Tanaka Laboratory)	Japan
KUTC	Kansai University	Japan
KYOTO,KyotoUniversity	Kyoto University (Kurohashi Laboratory)	Japan
LIUM	University of Le Mans	France
LTI	Language Technologies Institute, Carnegie Mellon University	USA
MCU	Ming-Chuan University	Taiwan
MSINT	Microsoft Research Asia	China
MSRA1click	Microsoft Research Asia (Virtual Sakai Lab)	China
NAIST	Nara Institute of Science and Technology	Japan
NAK	Keio University, Science and Technology	Japan
NCW	NTNU / NCCU / WebGenie Information Ltd.	Taiwan
NEU	Northeastern University, China	China
NKGW	NAKAGAWA LAB, Toyohashi University of Technology	Japan
NKI11	NKI-Lab Toyohashi University of Technology	Japan
NSNG	Northeastern University, USA / Wuhan University	USA
NTOU	National Taiwan Ocean University	Taiwan
NTTCS	Nippon Telegraph and Telephone Corporation	Japan
NTTUT	NTT Communication Science Labs. / the University of Tokyo	Japan
NTU	National Taiwan University	Taiwan
OKSAT	Osaka Kyoiku University	Japan
ORG/WSE	INTENT Organisers (Microsoft Research Asia)	China
QUT	Queensland University of Technology	Australia
RMIT	RMIT University	Australia
RWTH	RWTH Aachen University	Germany
RYSDT	Ryukoku NL-SLP Lab, Ryukoku University	Japan
SINAI	University of Jaén	Spain
SITLP	Shibaura Institute of Technology LP lab	Japan
SJTUB,SJTUBCMI	Center for Brain-like Computing and Machine Intelligence, Shanghai Jiao Tong University	China
TBFD	Team Big Four Dragons: Daido University / The University of Tokushima / Nagoya University	Japan
THU,THUIR	Tsinghua University	China
TORI	Tottori University	Japan
TOTLA	Tokyo Metropolitan University	Japan
TTOKU	Tokyo Institute of Technology	Japan
TU	Tohoku University	Japan
TUTA1	University of Tokushima	Japan
UIOWA	University of Iowa	USA
UKP	TU Darmstadt	Germany
uogTr	University of Glasgow	UK
UOTTS	The University of Tokyo (Tsujii Laboratory)	Japan
UTLIS	Language Information Sciences, The University of Tokyo	Japan
UWat	University of Waterloo	Canada
WHUTE	Wuhan University	China
WUST	Wuhan University of Science and Technolog	China
YLAB	Yamashita Laboratory, Ritsumeikan University	Japan
Yuntech	National Yunlin University of Science and Technology	Taiwan
ZSWSL	Beijing University of Posts and Telecommunications	China

	RITE	PatentMT	INTENT/1CLICK	GeoTime	CrossLink	SpokenDoc	VisEx	TOTAL
Japan	7	7	4	4	1	9	4	36
China	6	7	10	1	2			26
Taiwan	7	2	2		2			13
USA	3	2		2				7
Korea		1	1	1	2			5
Germany		1			2			3
Australia			1	1	1			3
Spain				2				2
UK			1		1			2
Canada			1					1
France		1						1
India	1							1
Ireland						1		1
Portugal				1				1
TOTAL	24	21	20	12	11	10	4	102

Number of participating teams

Table 4: Number of runs submitted to each task.

task	#runs
RITE	212
PatentMT	130
INTENT/1CLICK	106
GeoTime	68
CrossLink	57
SpokenDoc	39
VisEx	8
TOTAL	620

Languages covered

	RITE	Patent MT	INTENT	1CLICK	GeoTime	CrossLink	Spoken Doc	VisEx
Chinese (simplified)		CE						
Chinese (traditional)								
English		EJ			EJ	EC, EJ, EK		Event collection only
Japanese		JE			JE			
Korean								

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

GeoTime (Geotemporal Search)

Search that answers questions of
location and time (events)

Requires NLP processing to be successful:
Geo-tagging and Temporal expression tagging

*Date: **1998-10-20***
DOCNO: XIE19981020.0050
HEADLINE: 700 **Nigerians** Die in Oil Pipeline Fire
DATELINE: **LAGOS, October 19** (Xinhua)
TEXT: **Nigerian** police said **Monday** that the death toll in the weekend explosion and fire from a petroleum pipeline at **Jesse** in southern **Nigeria's Delta State** had risen to 700. The disaster occurred **Sunday** when a burst oil pipeline caught fire as hundreds of people from the local community were illegally scooping fuel from the scene, killing some 300 villagers instantly.

GeoTime Main Findings

- **Geographic and Temporal document processing produces better performance than bag-of-words search with blind feedback**
- **Processing relative temporal expressions is difficult ("last Wednesday")**
- **Manual query development performance substantially exceeded automatic query construction – thus much remains to be done**
- **Most systems used external resources (Wikipedia, Gazetteers) for geography**

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

INTENT

Subtopic Mining

Given a query,

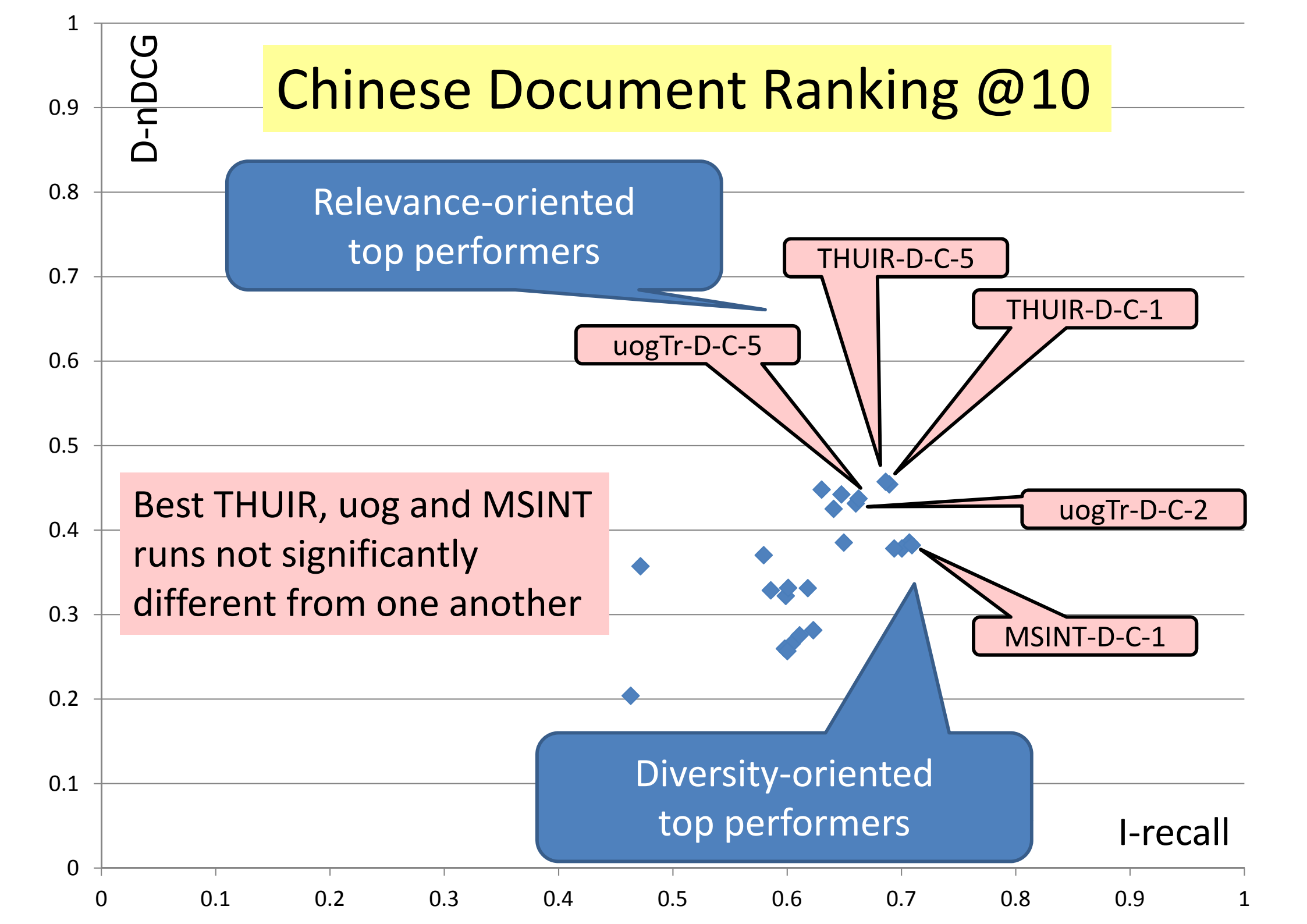
possible subtopics

Document Ranking

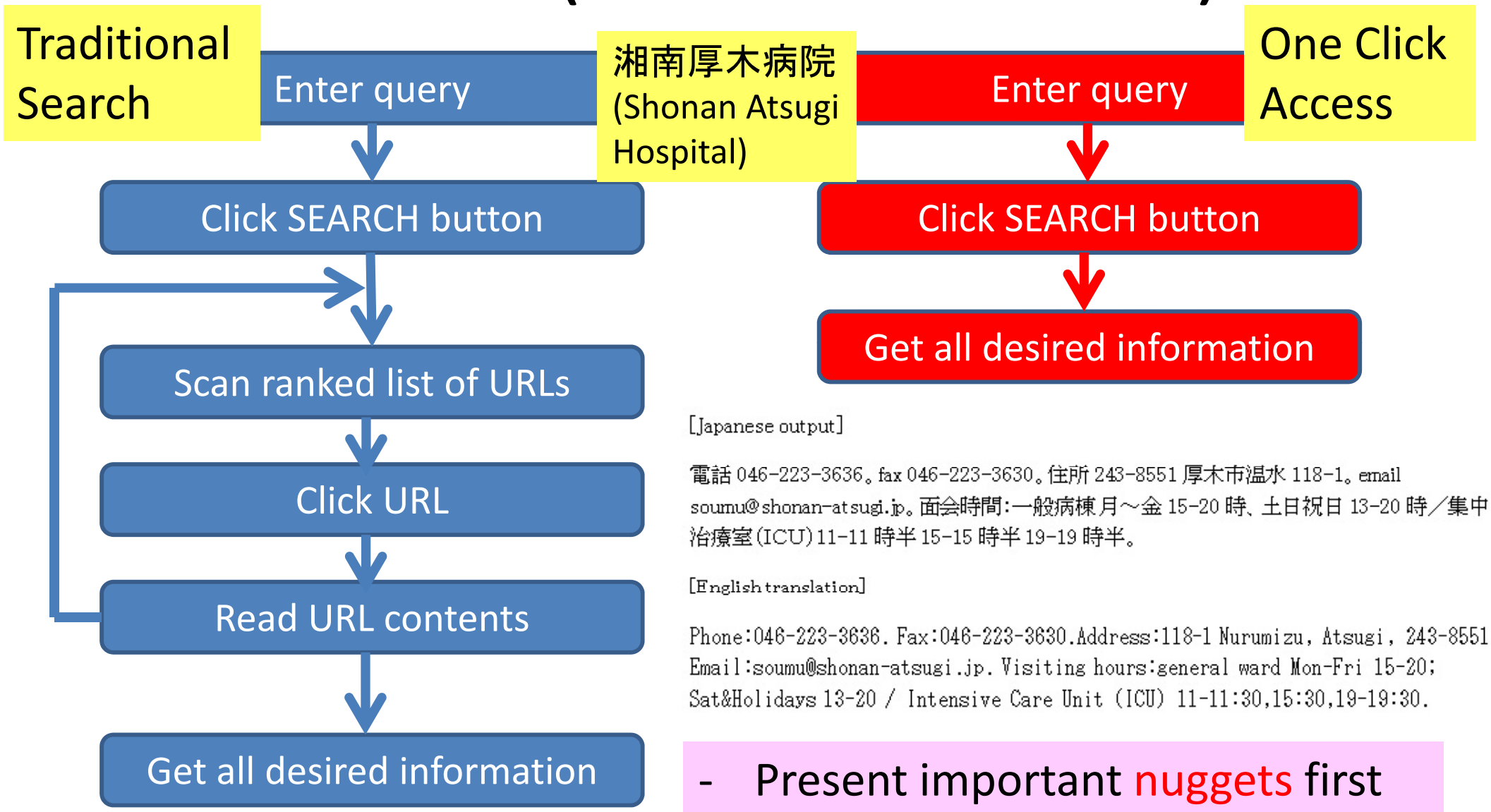
Given a query,

return a diversified

web search


Chinese Document Ranking @10
D-nDCG
I-recall
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Relevance-oriented top performers
THUIR-D-C-5
THUIR-D-C-1
uogTr-D-C-5
uogTr-D-C-2
MSINT-D-C-1
Best THUIR, uog and MSINT runs not significantly different from one another
Diversity-oriented top performers

1CLICK (One Click Access)



[Japanese output]

電話 046-223-3636。fax 046-223-3630。住所 243-8551 厚木市温水 118-1。email soumu@shonan-atsugi.jp。面会時間:一般病棟 月～金 15-20 時、土日祝日 13-20 時／集中治療室(ICU) 11-11 時半 15-15 時半 19-19 時半。

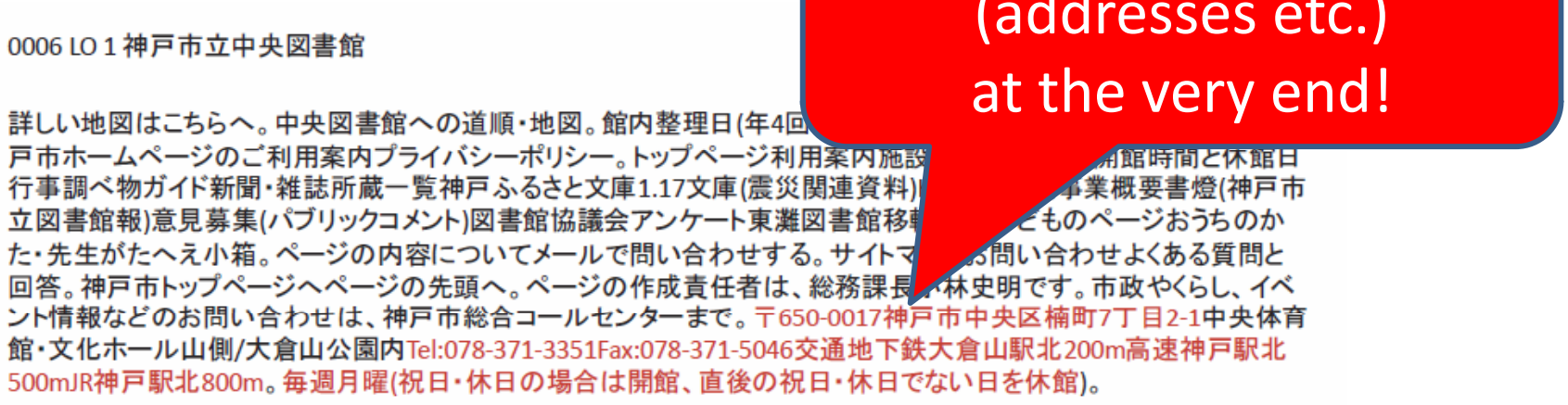
[English translation]

Phone:046-223-3636. Fax:046-223-3630.Address:118-1 Nurumizu, Atsugi, 243-8551. Email:soumu@shonan-atsugi.jp. Visiting hours:general ward Mon-Fri 15-20; Sat&Holidays 13-20 / Intensive Care Unit (ICU) 11-11:30,15:30,19-19:30.

- Present important nuggets first
- Minimise the amount of text the user has to read

1CLICK Main Findings

- 1CLICK evaluation framework is feasible (reasonably efficient) and useful! Unlike previous nugget-based methods, it can penalise systems like this:



- Information extraction, passage retrieval, summarisation approaches were used and the results are successful as a first trial

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

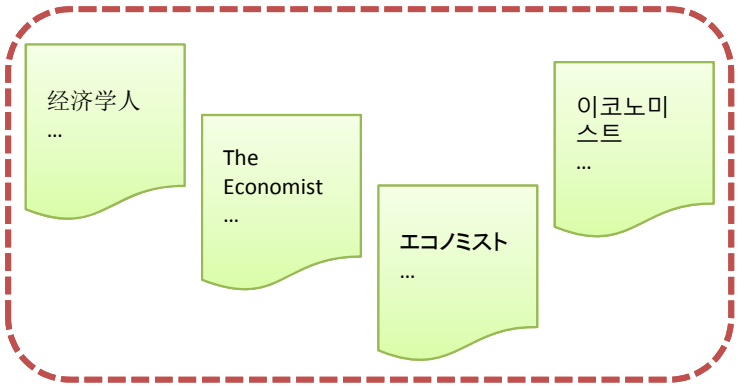
Crosslink (Cross-lingual Link Discovery)

Article: Australia

...
Ranked third in the Index of Economic Freedom (2010),[178] Australia is the world's thirteenth largest economy and has the ninth highest per capita GDP; higher than that of the United Kingdom, Germany, France, Canada, Japan, and the United States. The country was ranked second in the United Nations 2010 Human Development Index and first in Legatum's 2008 Prosperity Index.[179] All of Australia's major cities fare well in global comparative livability surveys;[180] Melbourne reached first place on **The Economist**'s 2011 World's Most Livable Cities list, followed by Sydney, Perth, and Adelaide in sixth, eighth, and ninth place respectively.[181] Total government debt in Australia is about $190 billion.[182] Australia has among the highest house prices and some of the highest household debt levels in the world.
...

No link was created for this term, for finding articles in languages we prefer traditionally we do:

Search → Translate



How to automatically create cross-lingual links for a document if no links existing yet?

- ❑ Links in other languages?
- ❑ New articles?
- ❑ Missing links?
- ❑ Not what we are looking for?
- ❑ What about other relevant links?

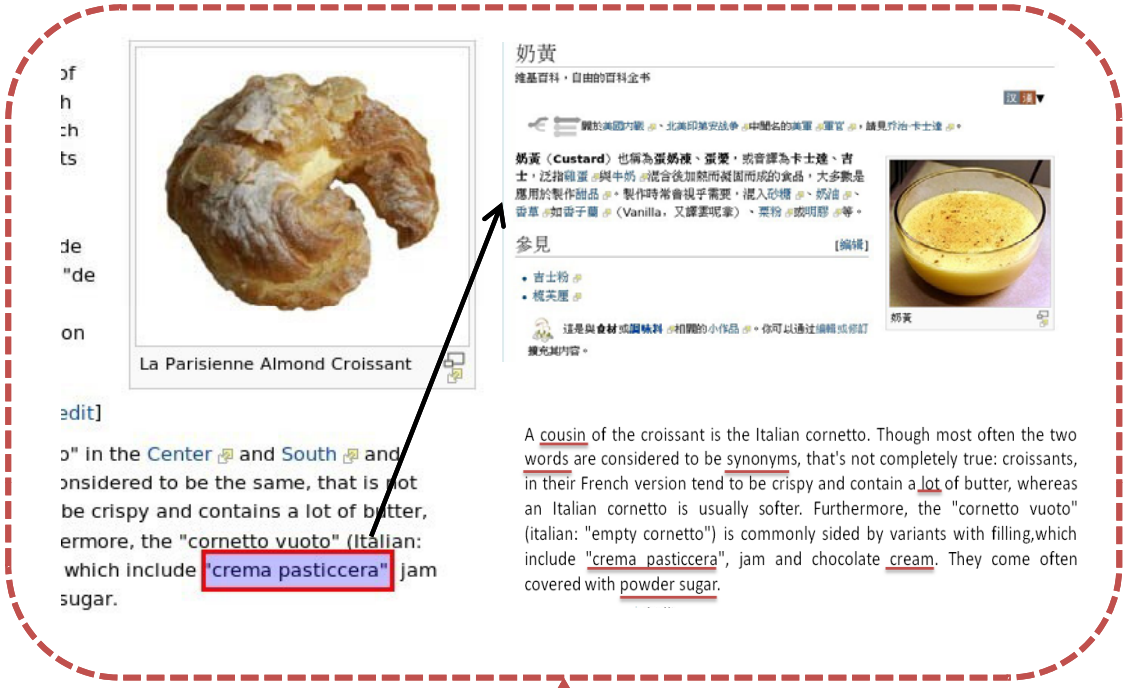
Cross-lingual Link Discovery

- ❖ Cross-lingual Links
- ❖ New Links
- ❖ Better Links
- ❖ More options

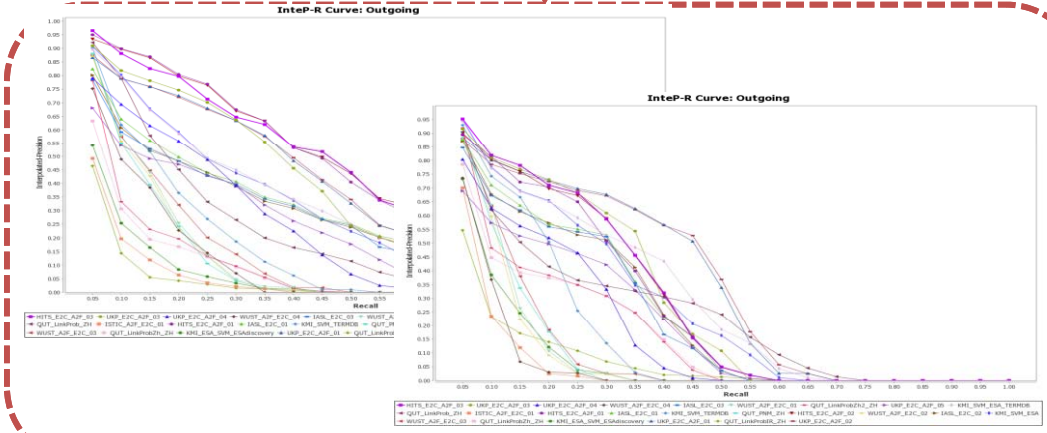
✓

- All about ***multi-lingual knowledge discovery*** in knowledge bases (e.g. Wikipedia)
- All about ***easy*** and ***efficient*** information access

Crosslink Outcomes



Evaluation Framework



- Many good submissions
- Their approaches were proven very effective in identifying meaningful anchors and suggesting high quality cross-lingual links
- The research results can really help the cross-lingual knowledge discovery in knowledge bases

- The evaluation framework was proven useful and effective
- The evaluation methods distinguish the good and the bad CLLD algorithms
- Evaluation of submitted runs shows that some of the algorithms used at NTCIR-9 were effective in finding links already in Wikipedia as well as previously unseen links.

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

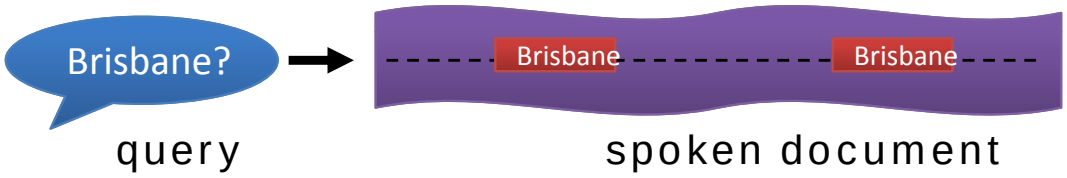
- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

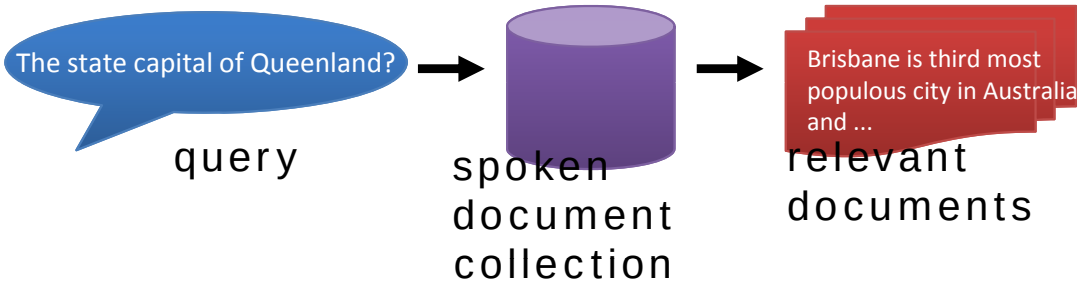
IR for Spoken Documents (SpokenDoc) Task Overview

- Background
  - Multi-media data have been increasing, but is difficult to be accessed.
  - Spoken Document Retrieval can solve the problem.
- Target Documents
  - 2702 lectures in Corpus of Spontaneous Japanese (CSJ), 628hrs.
  - Prepared two automatic reference transcriptions
    - word-based and syllable-based
    - enabled participants who were interested in SDR but not in ASR to participate in our tasks.

- Two Subtasks
  - **Spoken Term Detection**
    - Find the occurrences of the given queried term.



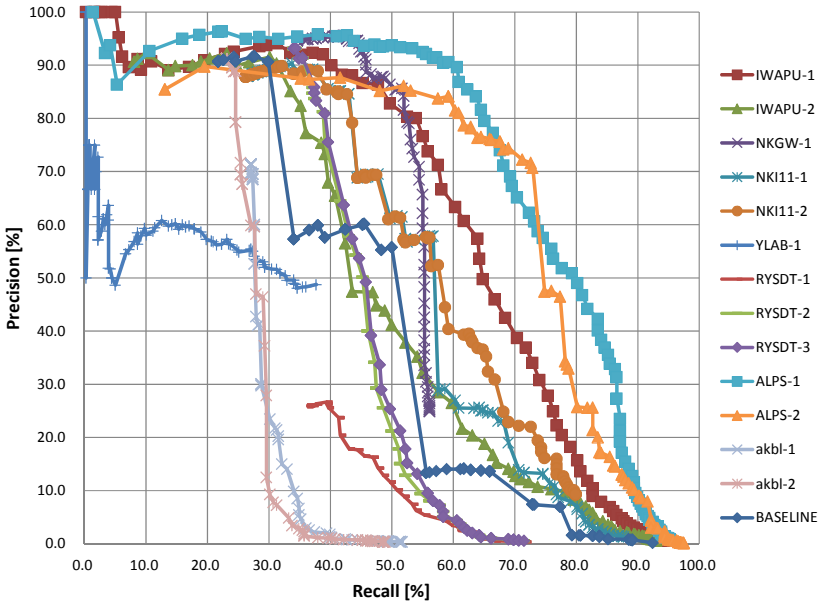
  - **Spoken Document Retrieval**
    - Find the passages including the relevant information related to a given query topic.



Findings from the Results

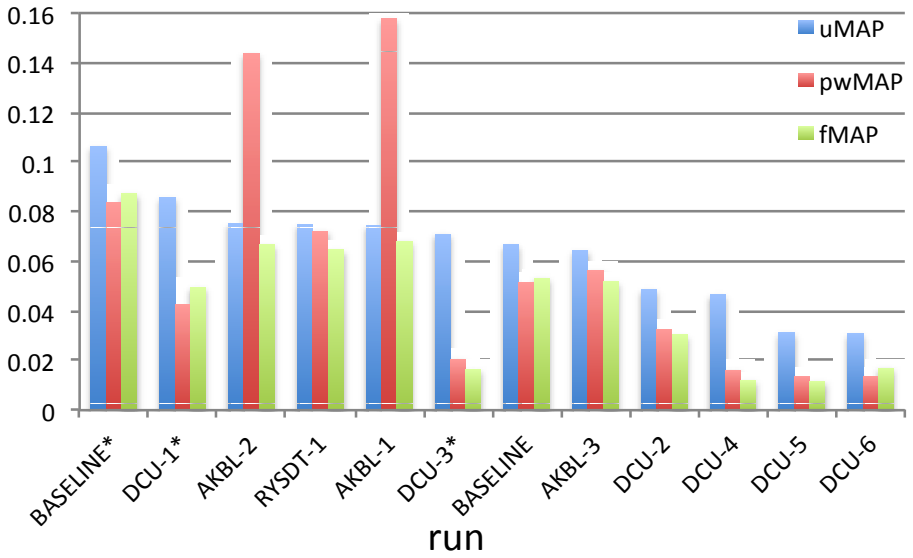
STD subtask

- Task participations were motivated by various research interests.
- Use of multiple transcriptions was one of the most effective methods for improving the performance.
- Indexing methods made the detection thousands times faster without much performance loss.



SDR subtask

- Using good transcription consistently improved the IR performance.
- Common techniques used for text-based IR could help SDR, while specific techniques for SDR could also be effective.
- Our boundary-free passage retrieval task was much harder than what had been expected.



TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

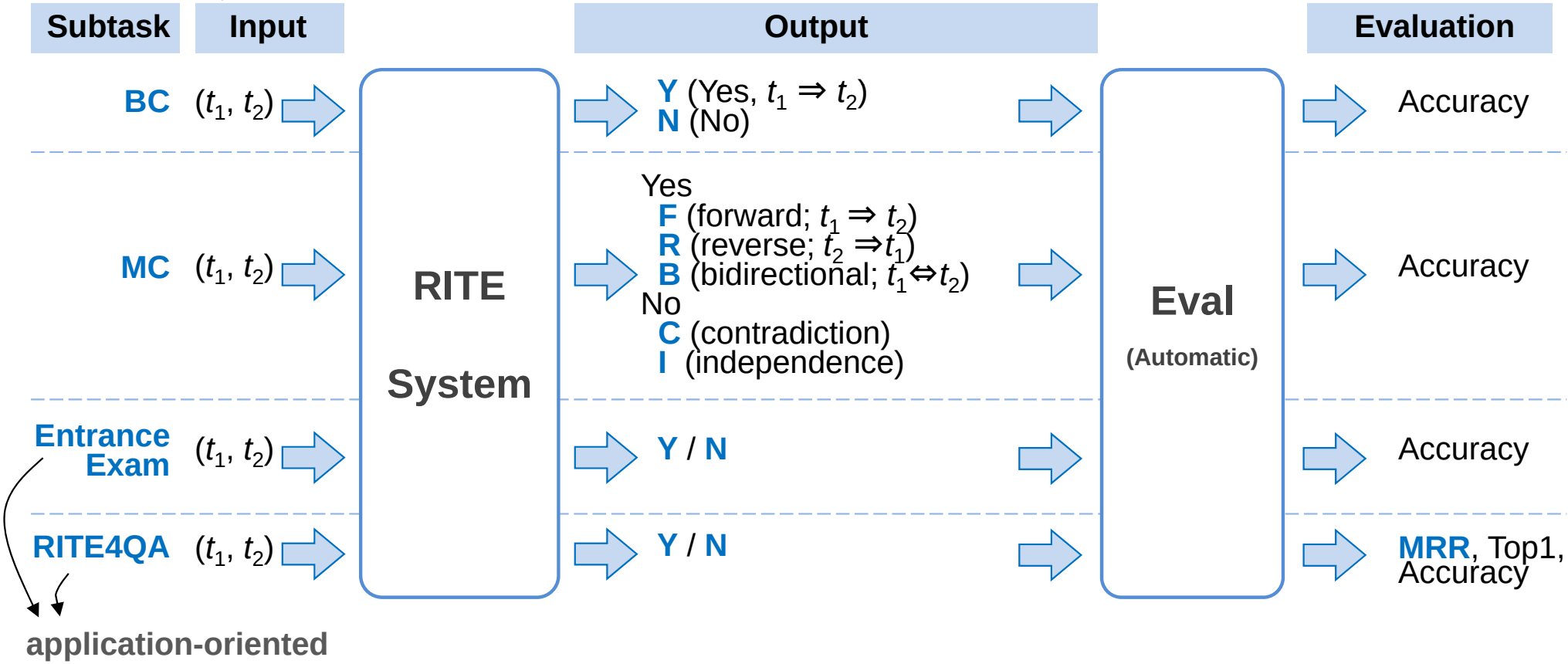
- To NTCIR-10 and beyond!

RITE (Recognizing Inference in TExt)

t_1: Yasunari Kawabata won the Nobel Prize in Literature for his novel "Snow Country".

t_2: Yasunari Kawabata is the writer of "Snow Country".

Does t_1 entail (infer) t_2?



Main Findings in RITE

- Best runs were able to outperform the strong character-overlap baseline
- Diverse techniques were explored – e.g. supervised machine learning, crowdsource-driven rule-based approach, predicate-argument structural matching, bilingual enrichment, etc.
- Simple core challenge allowed participants to focus on developing textual entailment components that are potentially applicable to various IA problems
- Fast automatic evaluation enabled participants to report additional experimental results (e.g. ablation study).
- Attracted many participants including new comers as a first NTCIR task – indicating there's a research need.

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

Patent Machine Translation Task

Isao Goto, Bin Lu, Ka Po Chow, Eiichiro Sumita, and Benjamin K. Tsou

- Goal
  - To develop **challenging** and **significant practical** research into patent machine translation.
- Task Design
  - Production and provision of large-scale training data and test sets for patent translation.
  - Evaluation of translation quality of patent sentences.
- Languages
  - **Chinese to English**, **Japanese to English**, and **English to Japanese**
- Evaluation Method
  - **Human evaluation** based on **adequacy** and **acceptability**
- Participants:
  - **21** groups

New

Largest compared to previous!

Test Collection and Remarkable Findings

- Test Collection

Training	CE	**1 million** patent **parallel** sentence pairs
		Over **300 million** patent **monolingual** sentences in English
	JE	Approximately **3.2 million** patent **parallel** sentence pairs
		Over **300 million** patent **monolingual** sentences in English
	EJ	Approximately **3.2 million** patent **parallel** sentence pairs
		Over **400 million** patent **monolingual** sentences in Japanese
Development	All	2,000 patent description parallel sentence pairs
Test	All	2,000 patent description sentences
		2,000 reference translations

- Remarkable Findings
  - **SMT** was the best system for **Chinese to English** and **English to Japanese** patent translation.
  - **80%** of patent sentences **could be understood** in the best system for **Chinese to English** patent translation.
  - **RBMT** was the best system for **Japanese to English** patent translation.

TALK OUTLINE

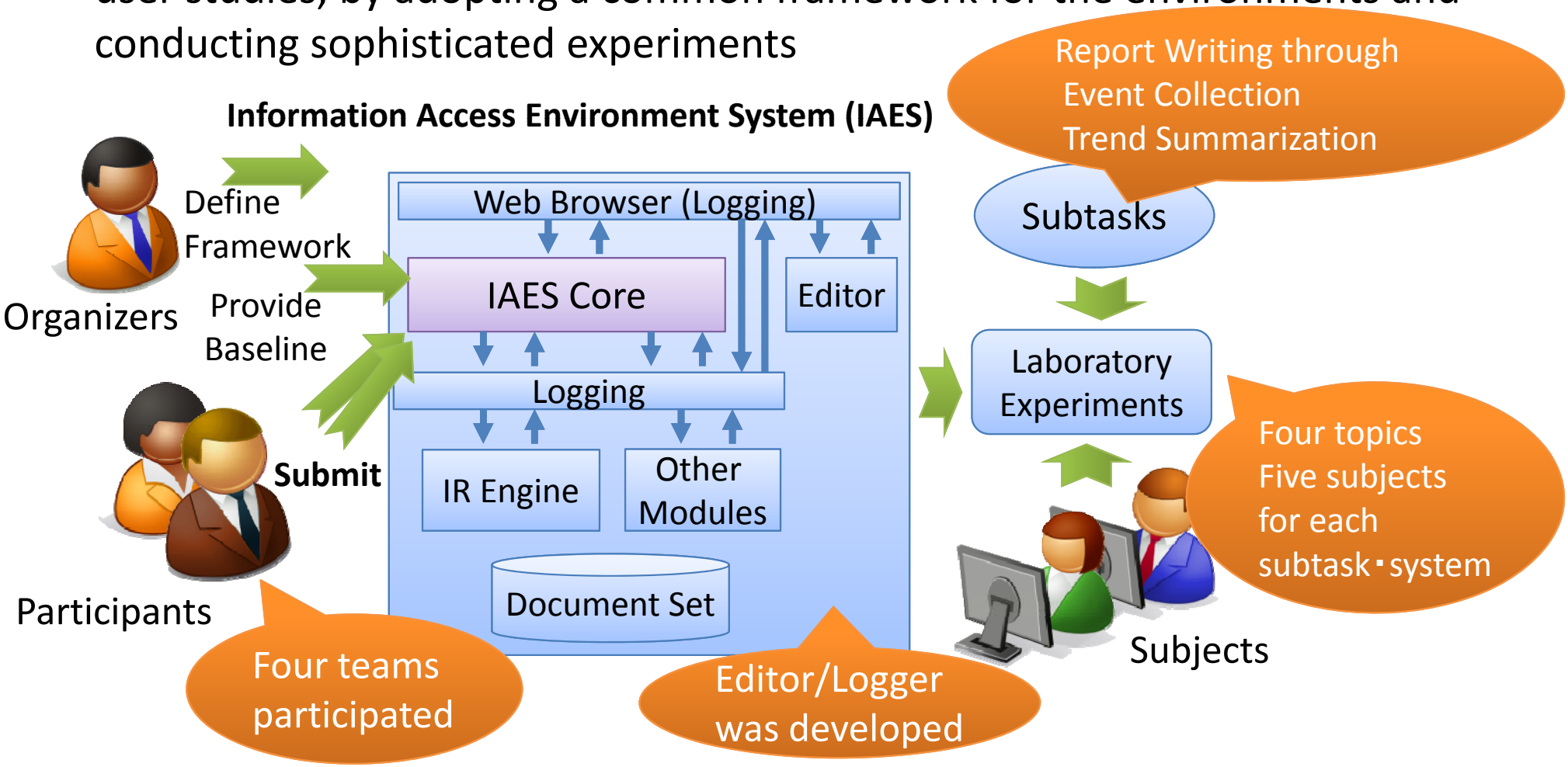
- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

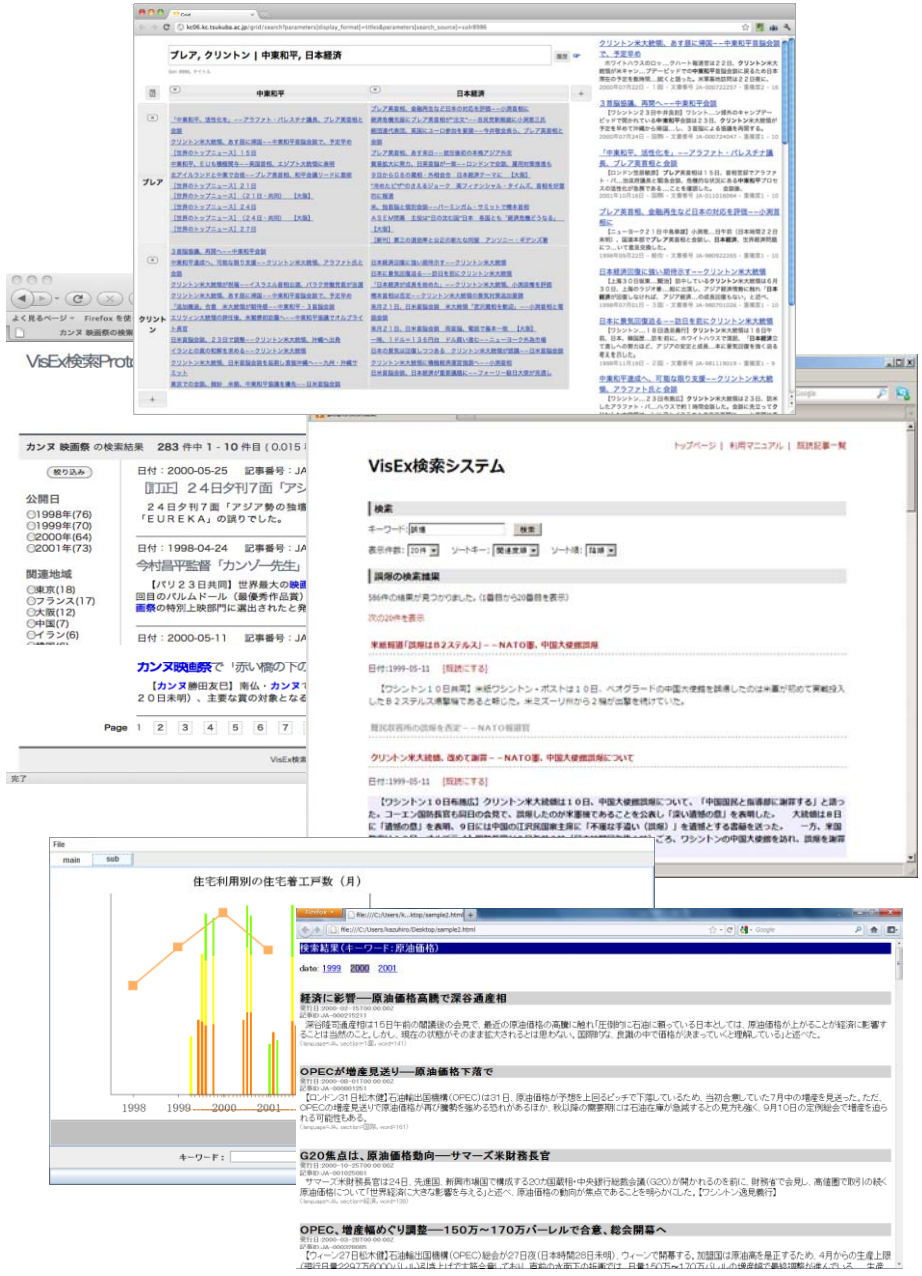
VisEx (Interactive Visual Exploration)

- **VisEx** is for establishing an efficient and effective framework for objectively evaluating interactive and explorative information access environments
- **VisEx** acquires more useful and richer evaluation data based on empirical user studies, by adopting a common framework for the environments and conducting sophisticated experiments



VisEx Outcome

- Every team obtained valuable data for the evaluation of the submitted system
- Extensive range of data was obtained on users' behavior and their impression
  - The basic framework was confirmed to be promising
- Lots of lessons have been learned
  - The task should be more difficult in order to derive explorative behaviors of users
  - The diversity of user behavior should be reduced
  - More sophisticated log-taking mechanism or principle is expected



Snapshots of the submitted systems

TALK OUTLINE

- Introduction to NTCIR
- NTCIR-9 Overview
- NTCIR-9 Tasks and Previews

- GeoTime
- INTENT (with 1CLICK)
- CrossLink
- SpokenDoc
- RITE
- PatentMT
- VisEx

- To NTCIR-10 and beyond!

EVIA 2011 Panel (yesterday afternoon)

TREC is 20 years old (and NTCIR is 13 years old), where now for evaluation campaigns?

Session chaired by

Mark Sanderson and William Webber

Panelists:

Ian Soboroff (TREC/TAC), Gareth Jones (MediaEval), Andrew Trotman and Shlomo Geva (INEX) and Hideo Joho (NTCIR)

NTCIR-10 Tasks Proposed!

- Core tasks
  - 1CLICK-2
  - CrossLink-2
  - GeoTime-3
  - INTENT-2
  - PatentMT-2
  - RITE-2
  - SpokenDoc-2
- Pilot tasks (all new!)
  - Math
  - ML4HMT-13
  - Patent Translation and Support of Patent Writing
- Join the task proposal discussion (Friday 13:40-15:10), the final session of NTCIR-9!

Special Thanks to

- General Chairs and EVIA Chairs
- Keynote and invited speakers
- Sponsors (Hitachi, IBM, IR-ALT, Japio, Mainichi newspapers, NICT, NTT Resonant)
- NTCIR-9 Program Committee
- Organising Committee
- Task Organisers and Participants
- Miho Sugimoto and other staff at NII
- All NTCIR-9 attendees!

Thank you and enjoy NTCIR-9!