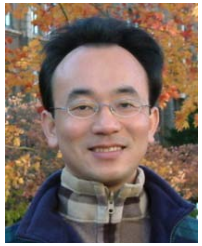
Workshop on Emerging Trends in
Interactive Information Retrieval & Evaluations

NTCIR Evaluation Activities: Recent Advances on RITE (Recognizing Inference in Text)



Min-Yuh Day, Ph.D.
Assistant Professor

Department of Information Management
Tamkang University

Tamkang University

http://mail.tku.edu.tw/myday

WETIIRE 2013, October 4, 2013, FJU, New Taipei City, Taiwan

Outline

- Overview of NTCIR Evaluation Activities
- Recent Advances on RITE (Recognizing Inference in Text)
- Research Issues and Challenges of Empirical Methods for Recognizing Inference in Text (EM-RITE)

Overview of NTCIR Evaluation Activities

NTCIR

NII Testbeds and Community for Information access Research

http://research.nii.ac.jp/ntcir/index-en.html

NII:
National Institute of Informatics

http://www.nii.ac.jp/en/

NTCIR

Research Infrastructure for Evaluating Information Access

- A series of evaluation workshops designed to enhance research in information-access technologies by providing an infrastructure for large-scale evaluations.
- Data sets, evaluation methodologies, forum

Source: Kando et al., 2013

NTCIR

- **Project started in late 1997**
  - 18 months Cycle

Source: Kando et al., 2013

NTCIR

- Data sets (Test collections or TCs)
  - Scientific, news, patents, web, CQA, Wiki, Exams
  - Chinese, Korean, Japanese, and English

Source: Kando et al., 2013

NTCIR

NII Testbeds and Community for Information access Research

NTCIR

- Tasks (Research Areas)
  - IR: Cross-lingual tasks, patents, web, Geo, Spoken
  - QA：Monolingual tasks, cross-lingual tasks
  - Summarization, trend info., patent maps,
  - Inference,
  - Opinion analysis, text mining, Intent, Link Discovery, Visual

Source: Kando et al., 2013

NTCIR

NTCIR-10 (2012-2013)

135 Teams Registered to Task(s)

973 Teams Registered so far

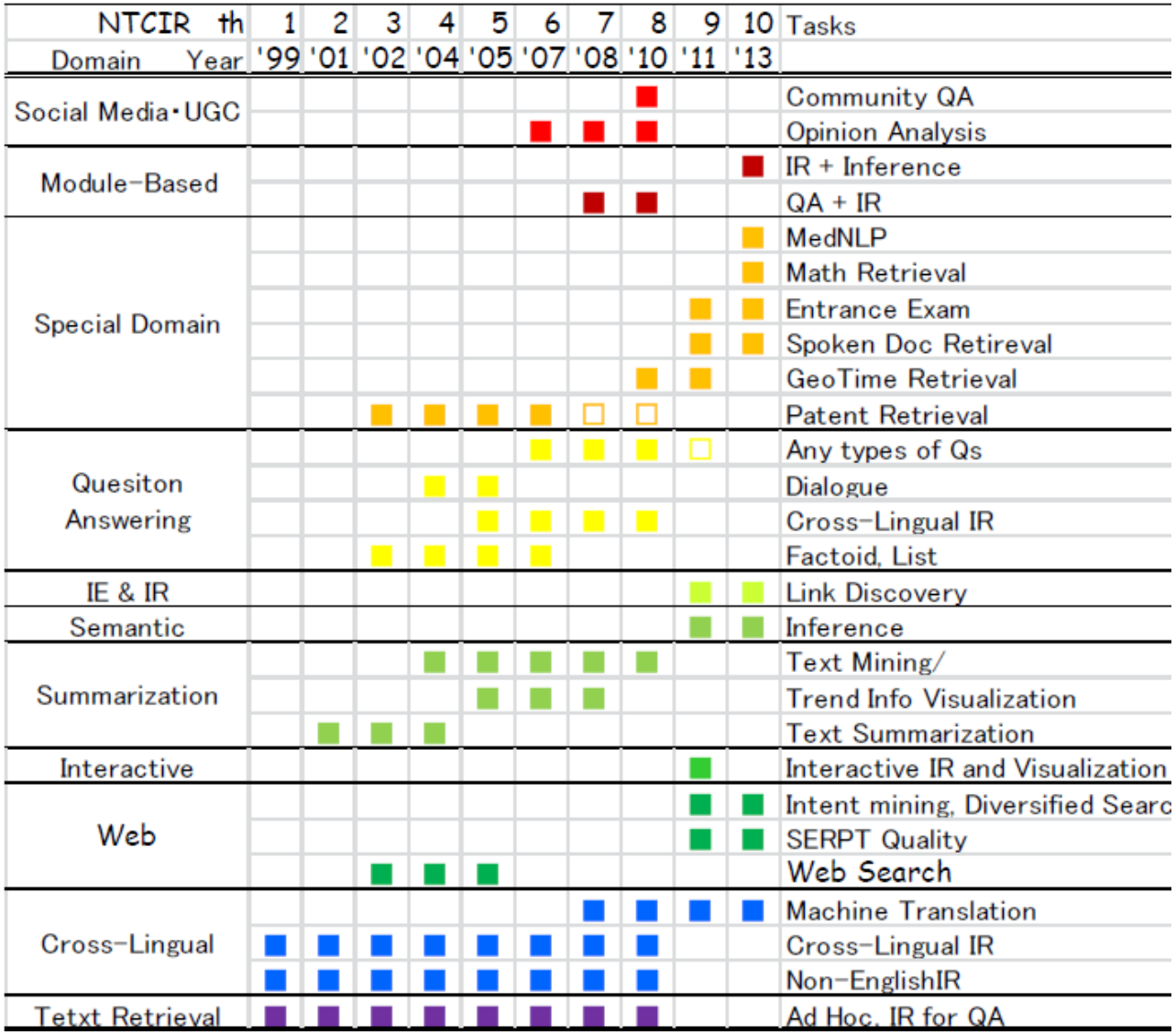
Source: Kando et al., 2013

Procedures in NTCIR Workshops

- Call for Task Proposals
- Selection of Task Proposals by Program Committee
- Discussion about Task Design in Each Task
- **Registration to Task(s)**
  - Deliver Training Data (Documents, Topics, Answers)
    - Experiments and Tuning by Each Participants
  - Deliver Test Data (Documents and Topics)
    - Experiments by Each Participants
- **Submission of Experimental Results**
- Pooling the Answer Candidates from the Submissions, and Conduct Manual Judgments
- **Return Answers (Relevance Judgments) and Evaluation Results**
- **Conference** Discussion for the Next Round
- Test Collection Release for non-participants

Source: Kando et al., 2013

Tasks in NTCIR (1999-2013)



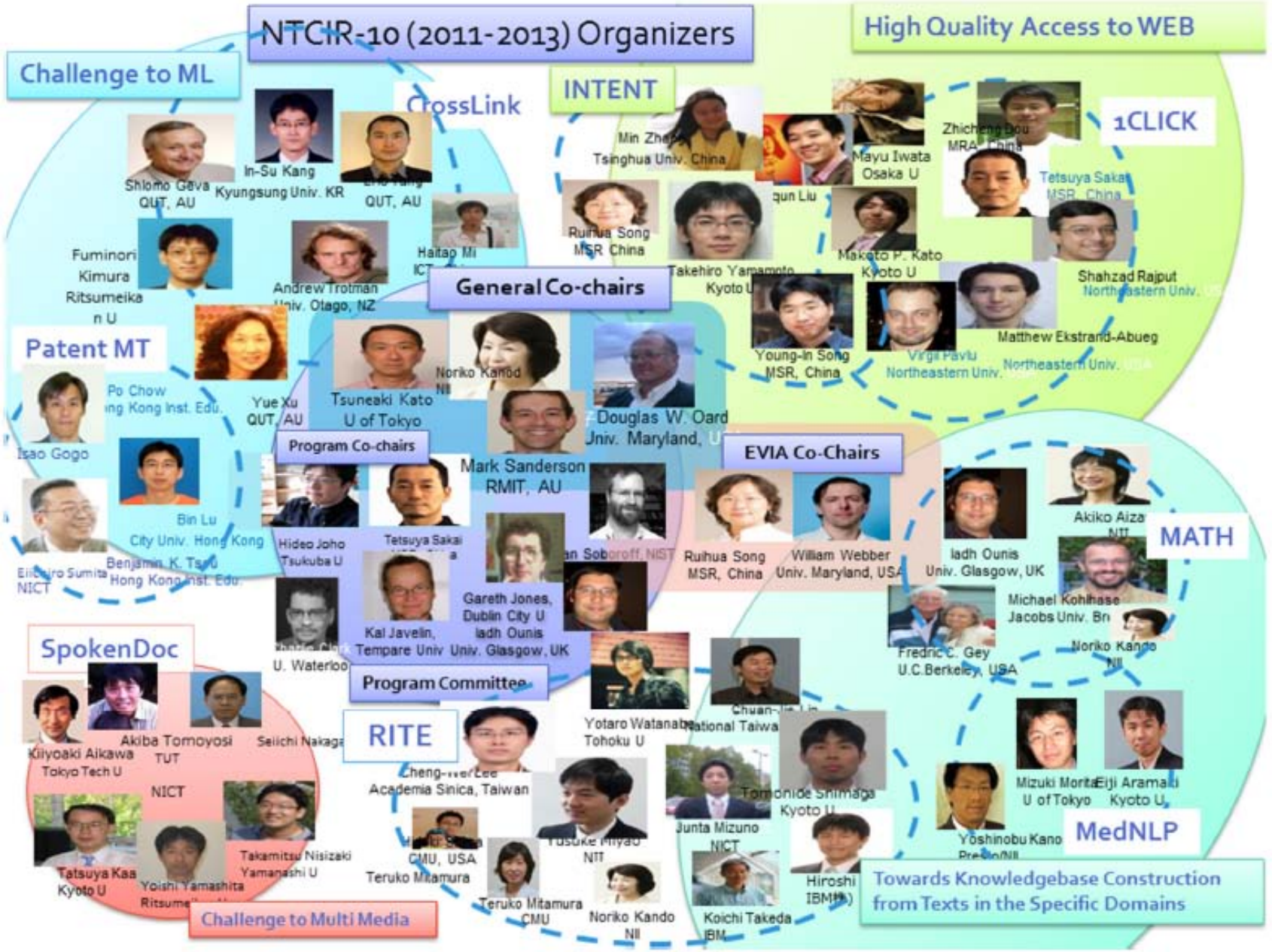
Year that the conference was held, The Tasks started 18 Months before

Source: Kando et al., 2013

Evaluation Tasks from NTCIR-1 to NTCIR-10

Year	1999	2001	2002	2004	2005	2007	2008	2010	2011	2013
Task/NTCIR round	1	2	3	4	5	6	7	8	9	10
Automatic Term Recognition and Role Analysis (TMREC)	9									
Ad hoc/Crosslingual IR(1) -> Chinese/English/Japanese IR(2) -> CLIR(3-6)	28	30	20	26	25	22				
Text Summarization Challenge (TSC)		9	8	9						
Web Retrieval (WEB)			7	11	7					
Question Answering Challenge (QAC)			16	18	7	8				
Patent Retrieval [and Classification] (PATENT)			10	10	13	12				
Multimodal Summarization for Trend Information (MUST)					13	15	13			
Crosslingual Question Answering (CLQA)(5,6) -> Advanced Crosslingual Information Access (ACLIA)(7,8)					14	12	19	14		
Opinion(6) -> Multilingual Opinion Analysis (MOAT)(7,8)						12	21	16		
Patent Mining (PAT-MN)							12	11		
Community Question Answering (CQA)								4		
Geotemporal IR (GeoTime)								13	12	
Interactive Visual Exploration (Vis-Ex)									4	
Patent Translation (PAT-MT)(7,8) -> Patent Machine Translation (PatentMT)(9,10)							15	8	21	21
INTENT									16	11
One Click Access (1CLICK) (subtask of INTENT at NTCIR-9)									4	8
Recognizing Inference in Text (RITE)									24	28
Crosslingual Link Discovery (Crosslink)									11	10
IR for Spoken Documents (SpokenDoc)									10	12
Math										6
Medical Natural Language Processing (MedNLP)										12

Source: Joho et al., 2013



Source: Kando et al., 2013

NTCIR

The 10th NTCIR Conference

Evaluation of Information Access Technologies

June 18-21, 2013

National Center of Sciences, Tokyo, Japan

Organized by:

NTCIR Organizing Committee

National Institute of Informatics (NII)

http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/index.html

NII Testbeds and Community for Information access Research

- Data sets / Users' Information Seeking Tasks
- Evaluation Methodology
- Reusable vs Reproducibility
- User-Centered Evaluation
- Experimental Platforms
- Open Advancement
- Advanced NLP □Knowledge- or Semantic-based
- Diversified IA Applications in the Real World
- Best Practice for a technology
  - Best Practice for Evaluation Methodology
- Big Data (Documents + Behaviour data)

Source: Kando et al., 2013

NTCIR-11

Evaluation of Information Access Technologies

July 2013 - December 2014

http://research.nii.ac.jp/ntcir/ntcir-11/index.html

http://research.nii.ac.jp/ntcir/ntcir-11/index.html

NTCIT-11 Evaluation Tasks

(July 2013 - December 2014)

- **Six Core Tasks**
  - Search Intent and Task Mining ("IMine")
  - Mathematical Information Access ("Math-2")
  - Medical Natural Language Processing ("MedNLP-2")
  - Mobile Information Access ("MobileClick")
  - Recognizing Inference in TExt and Validation ("RITE-VAL")
  - Spoken Query and Spoken Document Retrieval ("SpokenQuery&Doc")
- **Two Pilot Tasks**
  - QA Lab for Entrance Exam ("QALab")
  - Temporal Information Access ("Temporalia“)

http://research.nii.ac.jp/ntcir/ntcir-11/tasks.html

NTCIR-11 Important Dates

(Event with * may vary across tasks)

- 2/Sep/2013 Kick-Off Event in NII, Tokyo
- 20/Dec/2013 Task participants registration due *
- 5/Jan/2014 Document set release *
- Jan-May/2014 Dry Run *
- Mar-Jul/2014 Formal Run *
- 01/Aug/2014 Evaluation results due *
- 01/Aug/2014 Early draft Task overview release
- 01/Sep/2014 Draft participant paper submission due *
- 01/Nov/2014 All camera-ready copy for proceedings due
- 9-12/Dec/2014 NTCIR-11 Conference in NII, Tokyo

http://research.nii.ac.jp/ntcir/ntcir-11/dates.html

NTCIR-11 Organization

- **NTCIR-11 General Co-Chairs:**


Noriko Kando (National Institute of Informatics, Japan)


Tsuneaki Kato (The University of Tokyo, Japan)


Douglas W. Oard (University of Maryland, USA)


Tetsuya Sakai (Waseda University, Japan)


Mark Sanderson (RMIT University, Australia)

- **NTCIR-11 Program Co-Chairs:**


Hideo Joho (University of Tsukuba, Japan)


Kazuaki Kishida (Keio University, Japan)

http://research.nii.ac.jp/ntcir/ntcir-11/chairs.html

Recent Advances on RITE
(Recognizing Inference in Text)

NTCIR-9 RITE (2010-2011)
NTCIR-10 RITE-2 (2012-2013)
NTCIR-11 RITE-VAL (2013-2014)

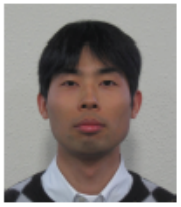
RITE-2
Recognizing Inference in TExt@NTCIR10

Overview of the Recognizing Inference in TExt (RITE-2) at NTCIR-10


Yotaro Watanabe
Tohoku University


Yusuke Miyao
NII


Junta Mizuno
Tohoku University


Tomohide Shibata
Kyoto University


Hiroshi Kanayama
IBM Research


Cheng-Wei Lee
Academia Sinica

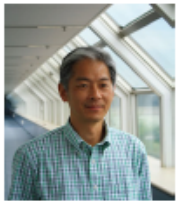

Chuan-Jie Lin
National Taiwan Ocean University


Shuming Shi
MSRA


Teruko Mitamura
CMU


Noriko Kando
NII


Hideki Shima
CMU

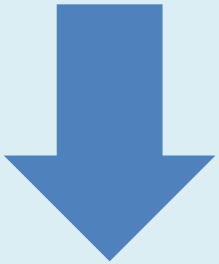

Kohichi Takeda
IBM Research

Source: Yotaro Watanabe, Yusuke Miyao, Junta Mizuno, Tomohide Shibata, Hiroshi Kanayama, Cheng-Wei Lee, Chuan-Jie Lin, Shuming Shi, Teruko Mitamura, Noriko Kando, Hideki Shima and Kohichi Takeda, Overview of the Recognizing Inference in Text (RITE-2) at NTCIR-10, Proceedings of NTCIR-10, 2013,
http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/pdf/NTCIR/RITE/01-NTCIR10-RITE2-overview-slides.pdf

Overview of RITE-2

- **RITE-2 is a generic benchmark task that addresses a common semantic inference required in various NLP/IA applications**

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



Can t_2 be inferred from t_1 ? (entailment?)

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

Source: Watanabe et al., 2013

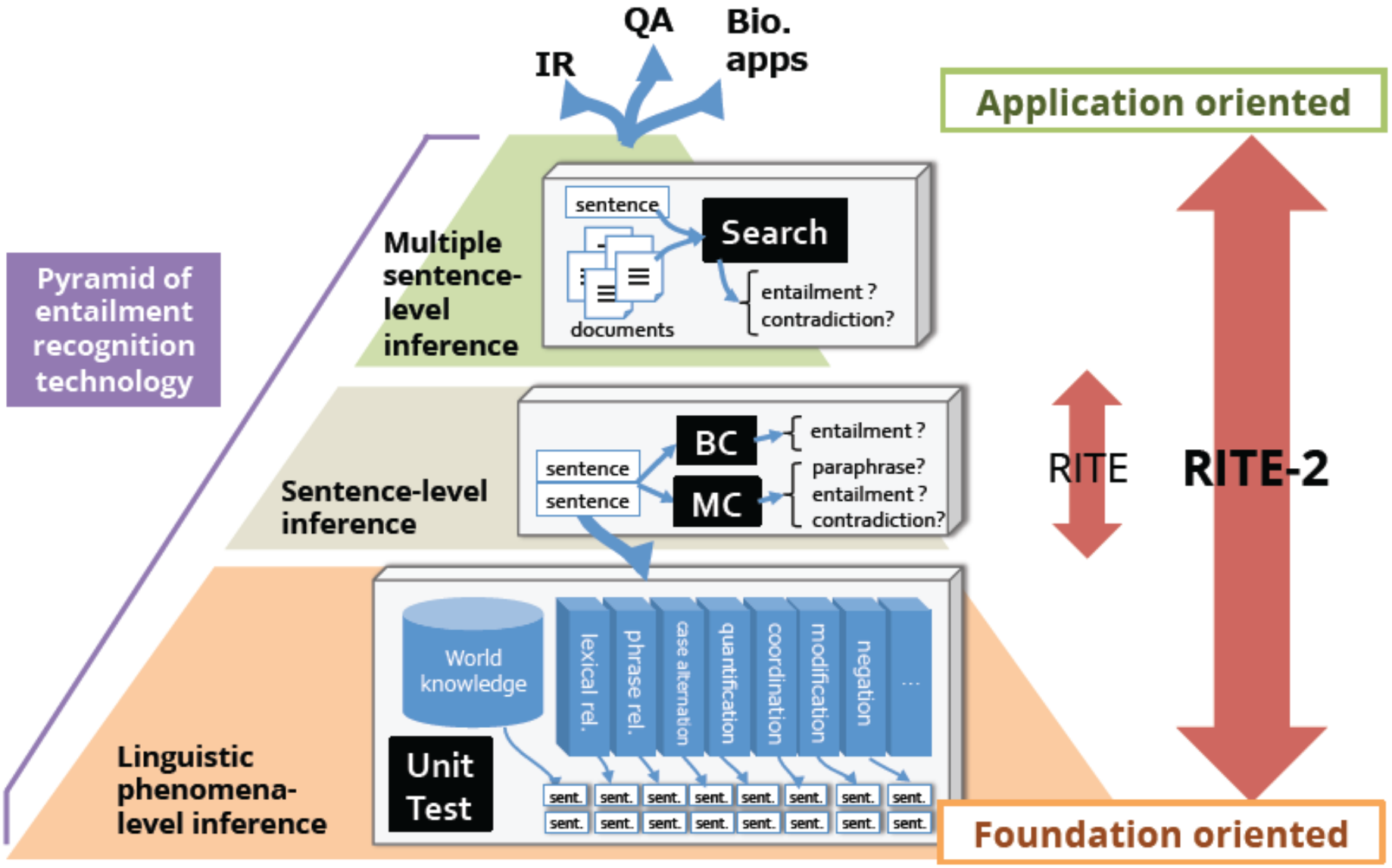
Yasunari Kawabata

Writer

Yasunari Kawabata was a Japanese short story writer and novelist whose spare, lyrical, subtly-shaded prose works won him the Nobel Prize for Literature in 1968, the first Japanese author to receive the award.

http://en.wikipedia.org/wiki/Yasunari_Kawabata

RITE vs. RITE-2



Source: Watanabe et al., 2013

Motivation of RITE-2

- Natural Language Processing (NLP) / Information Access (IA) applications
  - Question Answering, Information Retrieval, Information Extraction, Text Summarization, Automatic evaluation for Machine Translation, Complex Question Answering
- The current entailment recognition systems have not been mature enough
  - The highest accuracy on Japanese BC subtask in NTCIR-9 RITE was only 58%
  - There is still enough room to address the task to advance entailment recognition technologies

Source: Watanabe et al., 2013

BC and MC subtasks in RITE-2

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**."

- **BC subtask**

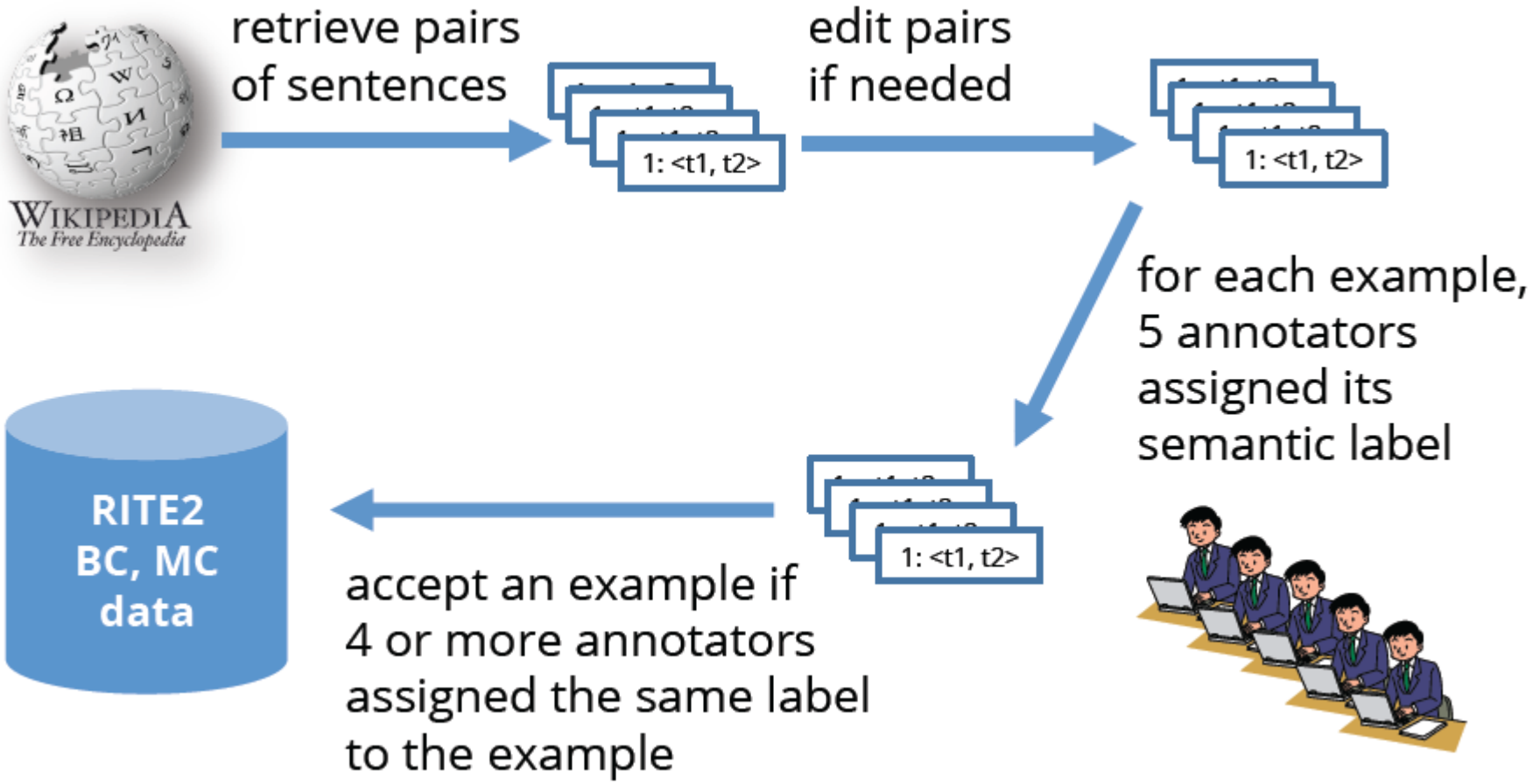
  - Entailment (t_1 entails t_2) or Non-Entailment (otherwise)

- **MC subtask**

  - Bi-directional Entailment (t_1 entails t_2 & t_2 entails t_1)
  - Forward Entailment (t_1 entails t_2 & t_2 does not entail t_1)
  - Contradiction (t_1 contradicts t_2 or cannot be true at the same time)
  - Independence (otherwise)

Source: Watanabe et al., 2013

Development of BC and MC data

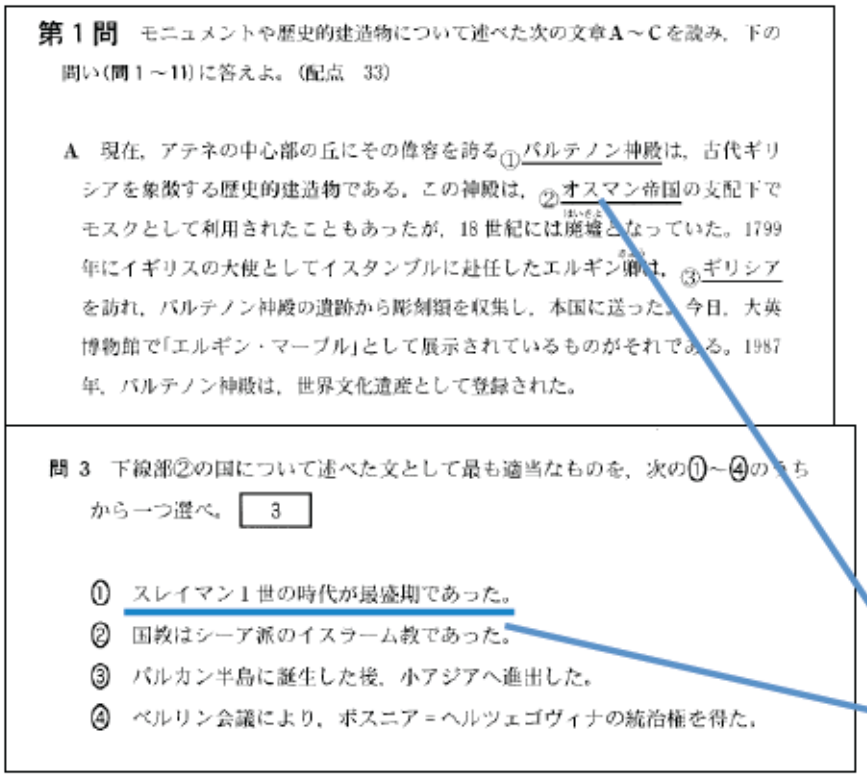


Source: Watanabe et al., 2013

Entrance Exam subtasks (Japanese only)

Entrance exam problem

National Center Test for University Admission
(*Daigaku Nyushi Center Shiken*)

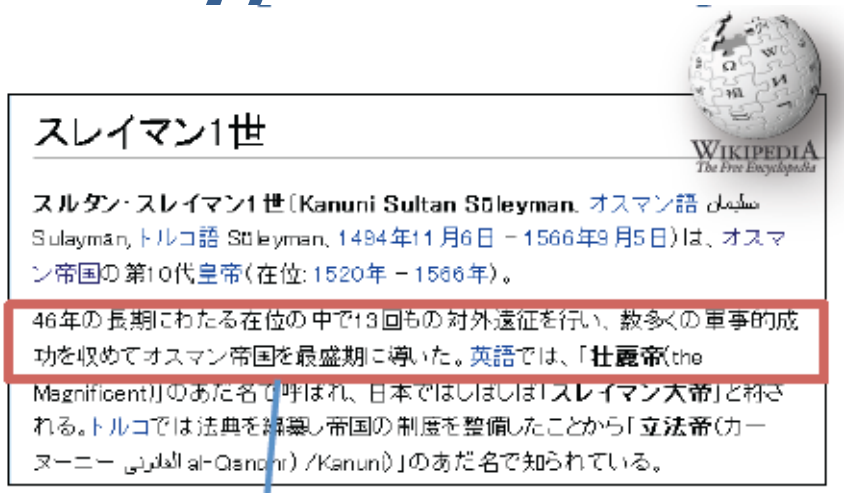


第１問　モニュメントや歴史的建造物について述べた次の文章Ａ～Ｃを読み，下の問い（問１～11）に答えよ。（配点　33）

Ａ　現在，アテネの中心部の丘にその偉容を誇る①パルテノン神殿は，古代ギリシアを象徴する歴史的建造物である。この神殿は，②オスマン帝国の支配下でモスクとして利用されたこともあったが，18世紀には廃墟となっていた。1799年にイギリスの大使としてイスタンブルに赴任したエルギン卿は，③ギリシアを訪れ，パルテノン神殿の遺跡から彫刻類を収集し，本国に送った。今日，大英博物館で「エルギン・マーブル」として展示されているものがそれである。1987年，パルテノン神殿は，世界文化遺産として登録された。

問３　下線部②の国について述べた文として最も適当なものを，次の①～④のうちから一つ選べ。　3

① スレイマン１世の時代が最盛期であった。
② 国教はシーア派のイスラーム教であった。
③ バルカン半島に誕生した後，小アジアへ進出した。
④ ベルリン会議により，ボスニア＝ヘルツェゴヴィナの統治権を得た。



スレイマン1世

スルタン・スレイマン1世（Kanuni Sultan Süleyman, オスマン語 سليمان Sulayman, トルコ語 Süleyman, 1494年11月6日 – 1566年9月5日）は、オスマン帝国の第10代皇帝（在位: 1520年 – 1566年）。

46年の長期にわたる在位の中で13回もの対外遠征を行い、数多くの軍事的成功を収めてオスマン帝国を最盛期に導いた。英語では、「壮麗帝（the Magnificent）」のあだ名で呼ばれ、日本ではしばしば「スレイマン大帝」と称される。トルコでは法典を編纂し帝国の制度を整備したことから「立法者（カーヌーニー القانوني al-Qanuni）/Kanuni）」のあだ名で知られている。

t_1: スレイマン1世は数多くの軍事的成功を収めてオスマン帝国を最盛期に導いた．(Suleiman I contributed in a lot of military successes and led the Ottoman Empire to its peak.

t_2: オスマン帝国ではスレイマン1世の時代が最盛期であった．(The Ottoman Empire's peak was during the reign of Suleiman I).

Source: Watanabe et al., 2013

Entrance Exam subtask: BC and Search

- **Entrance Exam BC**
  - Binary-classification problem (Entailment or Nonentailment)
  - t1 and t2 are given
- **Entrance Exam Search**
  - Binary-classification problem (Entailment or Nonentailment)
  - t2 and a set of documents are given
    - Systems are required to search sentences in Wikipedia and textbooks to decide semantic labels

Source: Watanabe et al., 2013

UnitTest (Japanese only)

- **Motivation**
  - Evaluate how systems can handle linguistic
  - phenomena that affects entailment relations
- **Task definition**
  - Binary classification problem (same as BC subtask)

Source: Watanabe et al., 2013

RITE4QA (Chinese only)

- **Motivation**
  - Can an entailment recognition system rank a set of unordered answer candidates in QA?
- **Dataset**
  - Developed from NTCIR-7 and NTCIR-8 CLQA data
    - t1: answer-candidate-bearing sentence
    - t2: a question in an affirmative form
- **Requirements**
  - Generate confidence scores for ranking process

Source: Watanabe et al., 2013

Evaluation Metrics

- **Macro F1 and Accuracy (BC, MC, ExamBC, ExamSearch and UnitTest)**

$$MacroF1 = \frac{1}{|C|}\sum_{c \in \mathcal{C}} F1_c \qquad Accuracy = 100 \times \frac{N_{correct}}{N_{examples}}$$

- **Correct Answer Ratio (Entrance Exam)**
  - Y/N labels are mapped into selections of answers and calculate accuracy of the answers
- **Top1 and MRR (RITE4QA)**

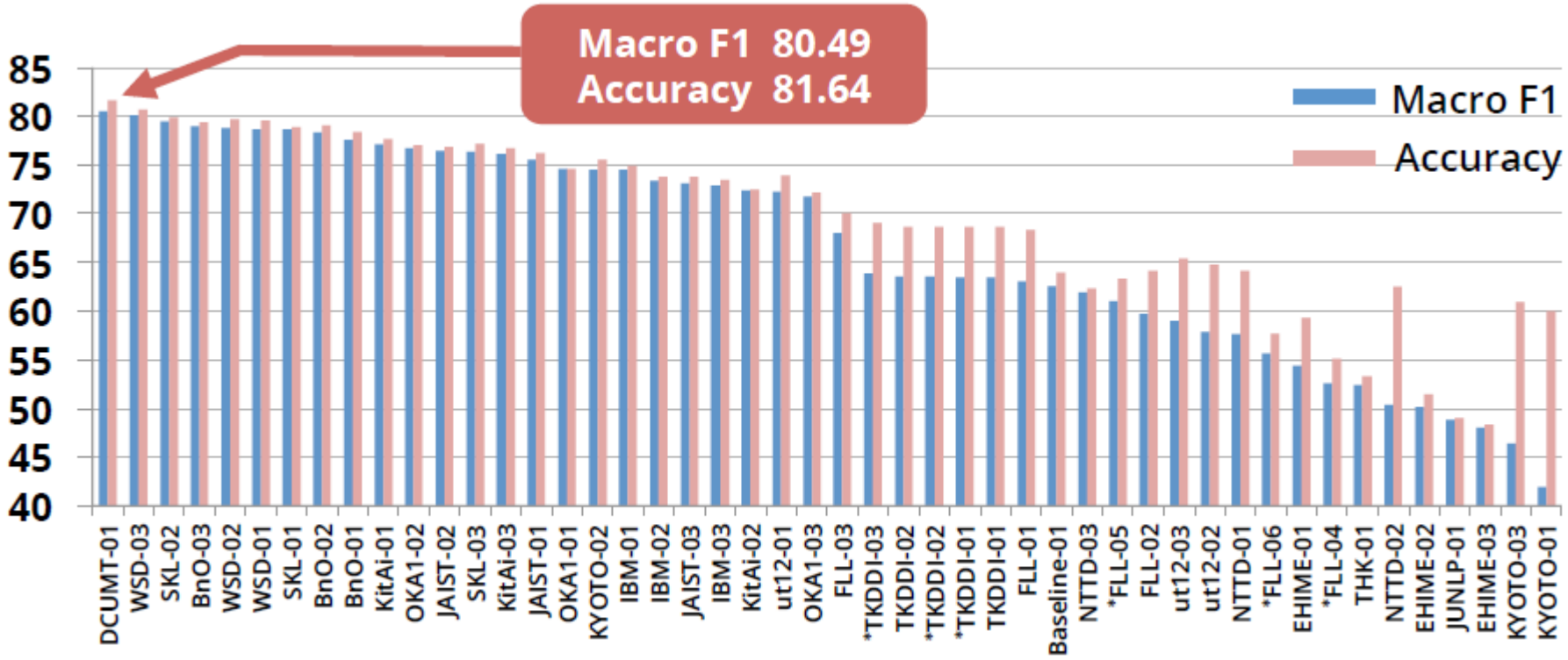
$$Top1 = \frac{1}{|Q|}\sum_{i=1}^{|Q|}[\text{top answer is correct}] \qquad MRR = \frac{1}{|Q|}\sum_{i=1}^{|Q|}\frac{1}{rank_i}$$

Source: Watanabe et al., 2013

Countries/Regions of Participants

Source: Watanabe et al., 2013

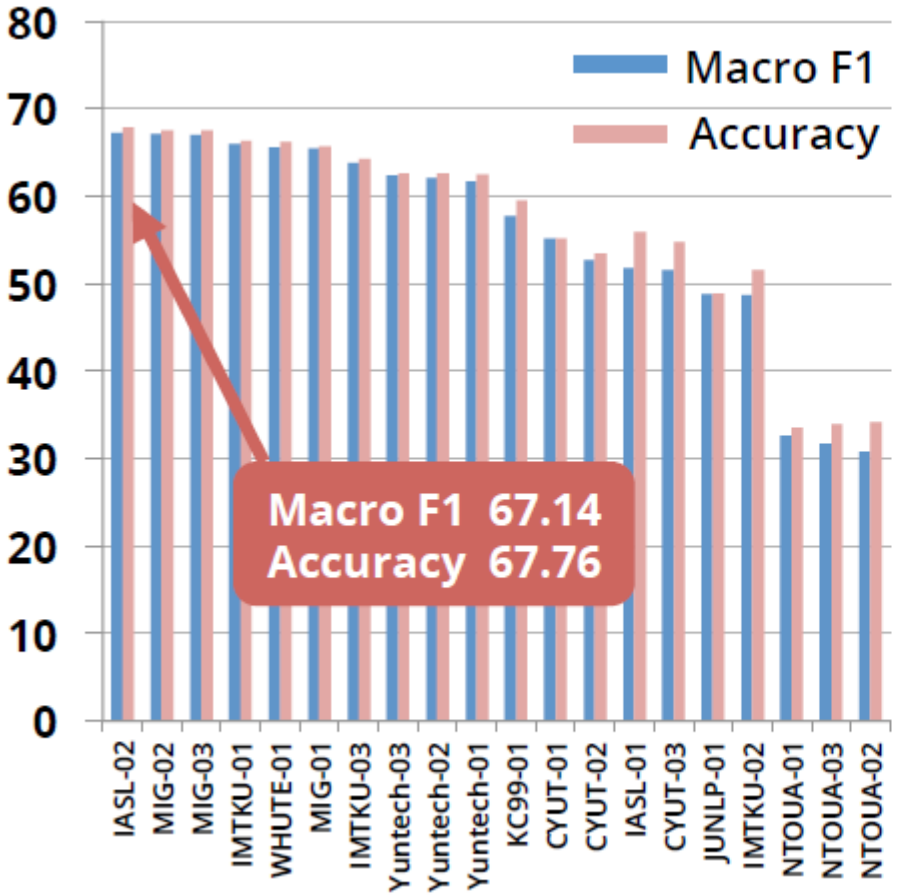
Formal Run Results: BC (Japanese)

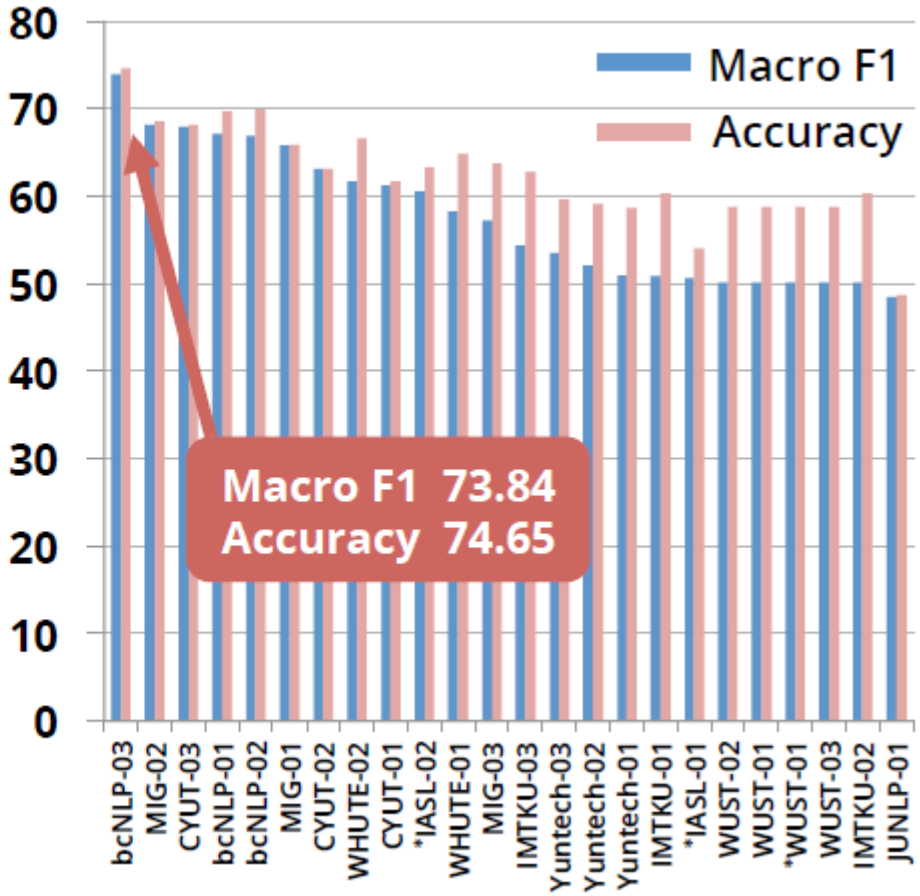


- **The best system achieved over 80% of accuracy (The highest score in BC subtask at RITE was 58%)**
- **The difference is caused by**
  - Advancement of entailment recognition technologies
  - Strict data filtering in the data development

Source: Watanabe et al., 2013

BC (Traditional/Simplified Chinese)

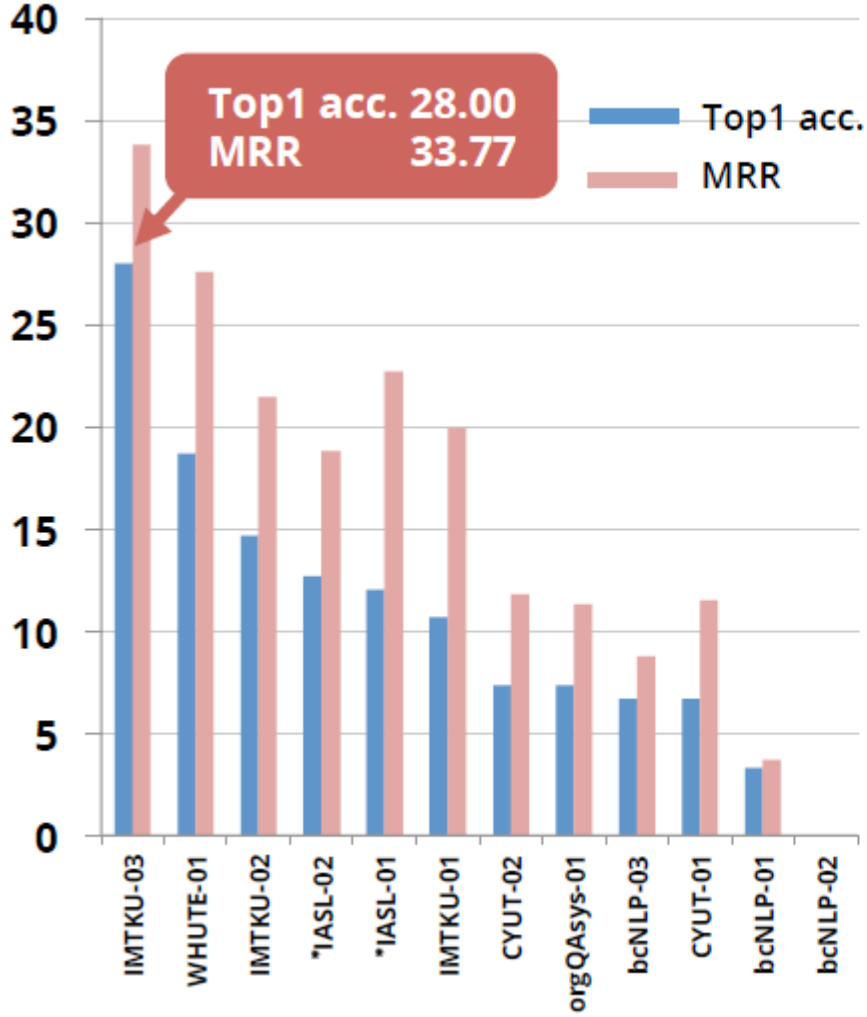


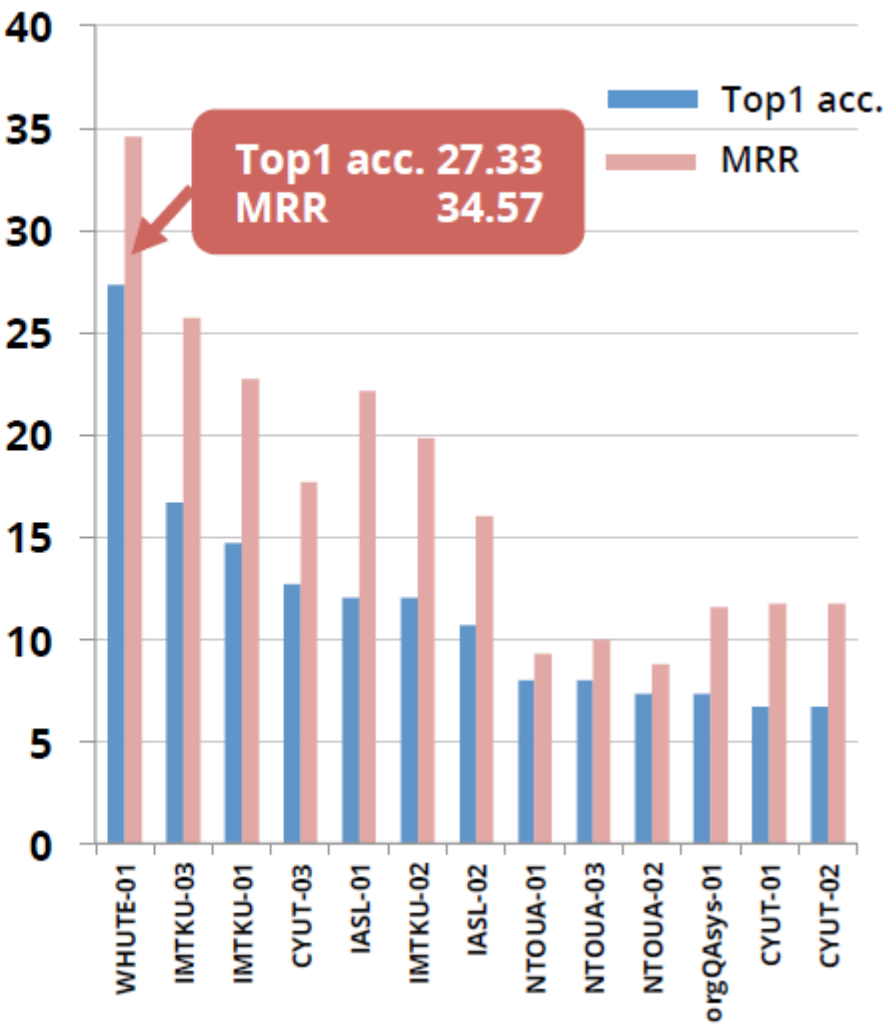


The top scores are almost the same as those in NTCIR-9 RITE

Source: Watanabe et al., 2013

RITE4QA (Traditional/Simplified Chinese)





Source: Watanabe et al., 2013

Participant's approaches in RITE-2

- **Category**
  - Statistical (50%)
  - Hybrid (27%)
  - Rule-based (23%)
- **Fundamental approach**
  - Overlap-based (77%)
  - Alignment-based (63%)
  - Transformation-based (23%)

Source: Watanabe et al., 2013

Summary of types of information explored in RITE-2

- Character/word overlap (85%)
- Syntactic information (67%)
- Temporal/numerical information (63%)
- Named entity information (56%)
- Predicate-argument structure (44%)
- Entailment relations (30%)
- Polarity information (7%)
- Modality information (4%)

Source: Watanabe et al., 2013

Summary of Resources Explored in RITE-2

- **Japanese**
  - Wikipedia (10)
  - Japanese WordNet (9)
  - ALAGIN Entailment DB (5)
  - Nihongo Goi-Taikei (2)
  - Bunruigoihyo (2)
  - Iwanami Dictionary (2)
- **Chinese**
  - Chinese WordNet (3)
  - TongYiCi CiLin (3)
  - HowNet (2)

Source: Watanabe et al., 2013

Advanced approaches in RITE-2

- **Logical approaches**
  - Dependency-based Compositional Semantics (DCS) [BnO], Markov Logic [EHIME], Natural Logic [THK]
- **Alignment**
  - GIZA [CYUT], ILP [FLL], Labeled Alignment [bcNLP, THK]
- **Search Engine**
  - Google and Yahoo [DCUMT]
- **Deep Learning**
  - RNN language models [DCUMT]
- **Probabilistic Models**
  - N-gram HMM [DCUMT], LDA [FLL]
- **Machine Translation**
  - [JUNLP, JAIST, KC99]

Source: Watanabe et al., 2013

NTCIR-11

RITE-VAL

(Recognizing Inference in Text and Validation)

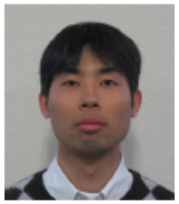
https://sites.google.com/site/ntcir11riteval/

NTCIR-11 RITE-VAL Task
(Recognizing Inference in Text and Validation)

Suguru Matsuyoshi[1]
[1]University of Yamanashi

Yotaro Watanabe[2]
[2]Tohoku University

Yusuke Miyao[3]
[3]National Institute of Informatics



Tomohide Shibata[4]
[4]Kyoto University

Teruko Mitamura[5]
[5]Carnegie Mellon University

Chuan-Jie Lin[6]
[6]National Taiwan Ocean University

Cheng-Wei Shih[7]
[7]Academia Sinica

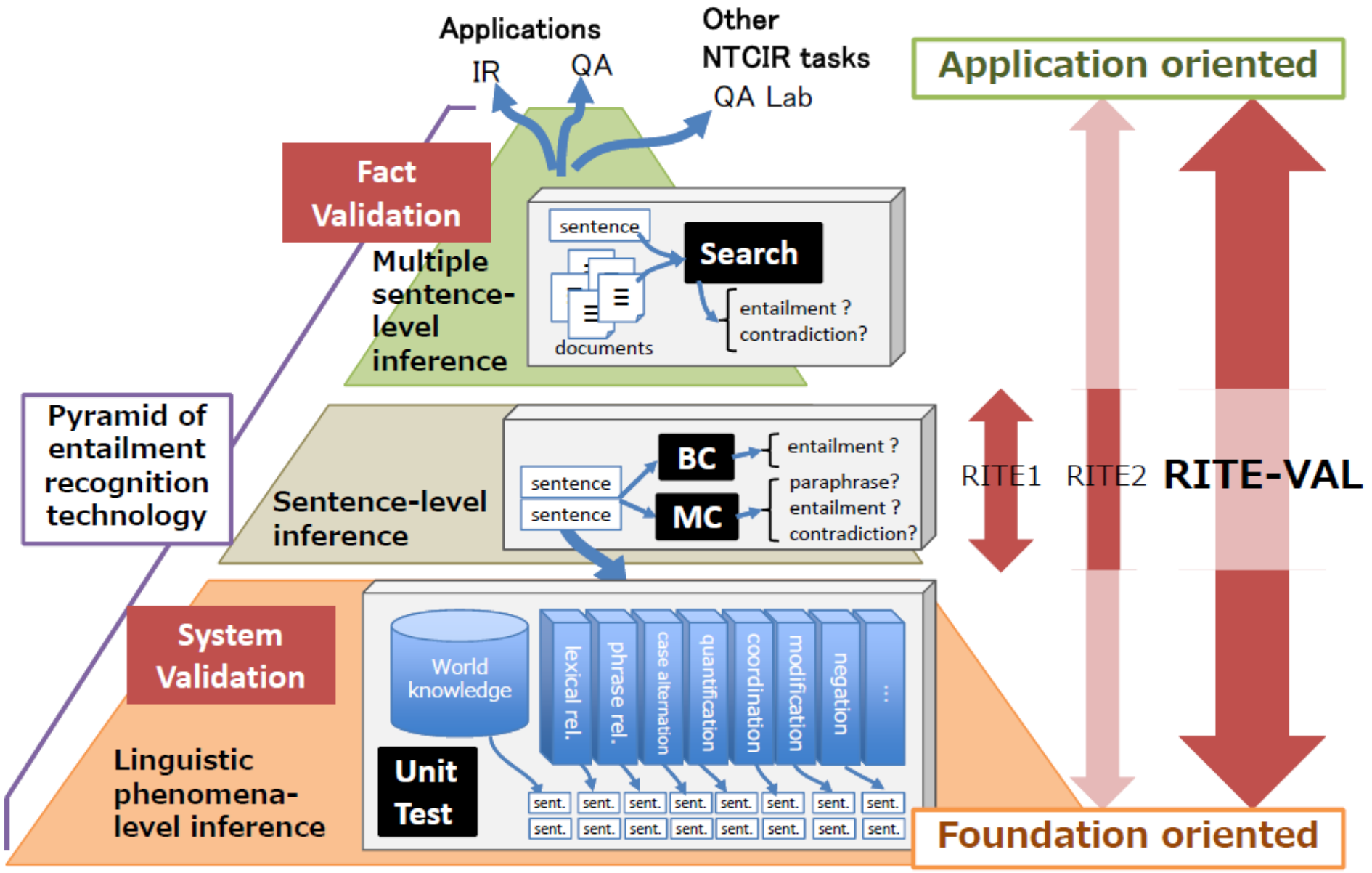
Source: Suguru Matsuyoshi, Yotaro Watanabe, Yusuke Miyao, Tomohide Shibata, Teruko Mitamura, Chuan-Jie Lin, Cheng-Wei Shih, Introduction to NTCIR-11 RITE-VAL Task (Recognizing Inference in Text and Validation), NTCIR-11 Kick-Off Event, September 2, 2013, http://research.nii.ac.jp/ntcir/ntcir-11/pdf/NTCIR-11-Kickoff-RITE-VAL-en.pdf

Overview of RITE-VAL

- RITE is a benchmark task for automatically detecting the following **semantic relations between two sentences**:
  - entailment, paraphrase and contradiction.
- Given a text t_1, can a computer infer that a hypothesis t_2 is most likely true (i.e., t_1 entails t_2) ?
  - 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**."
- Target languages:
  - Japanese, Simplified Chinese, Traditional Chinese, and English.

Source: Matsuyoshi et al., 2013

RITE-VAL

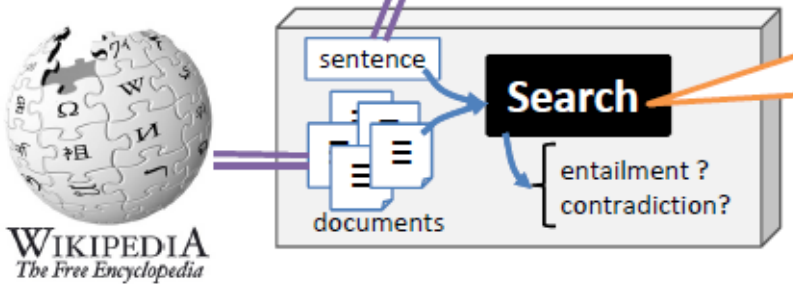


Source: Matsuyoshi et al., 2013

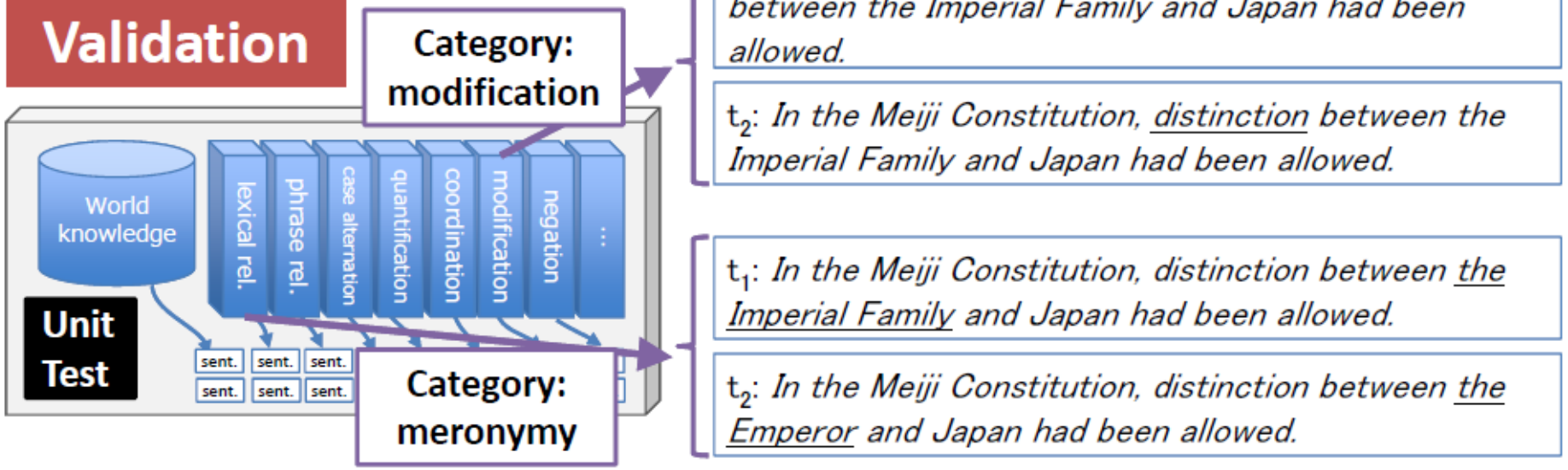
Main two tasks of RITE-VAL

Fact Validation

t_2: *The Kamakura Shogunate began in Japan in the 12th century.*



System Validation



Source: Matsuyoshi et al., 2013

Research Issues and Challenges of Empirical Methods for Recognizing Inference in Text (EM-RITE)

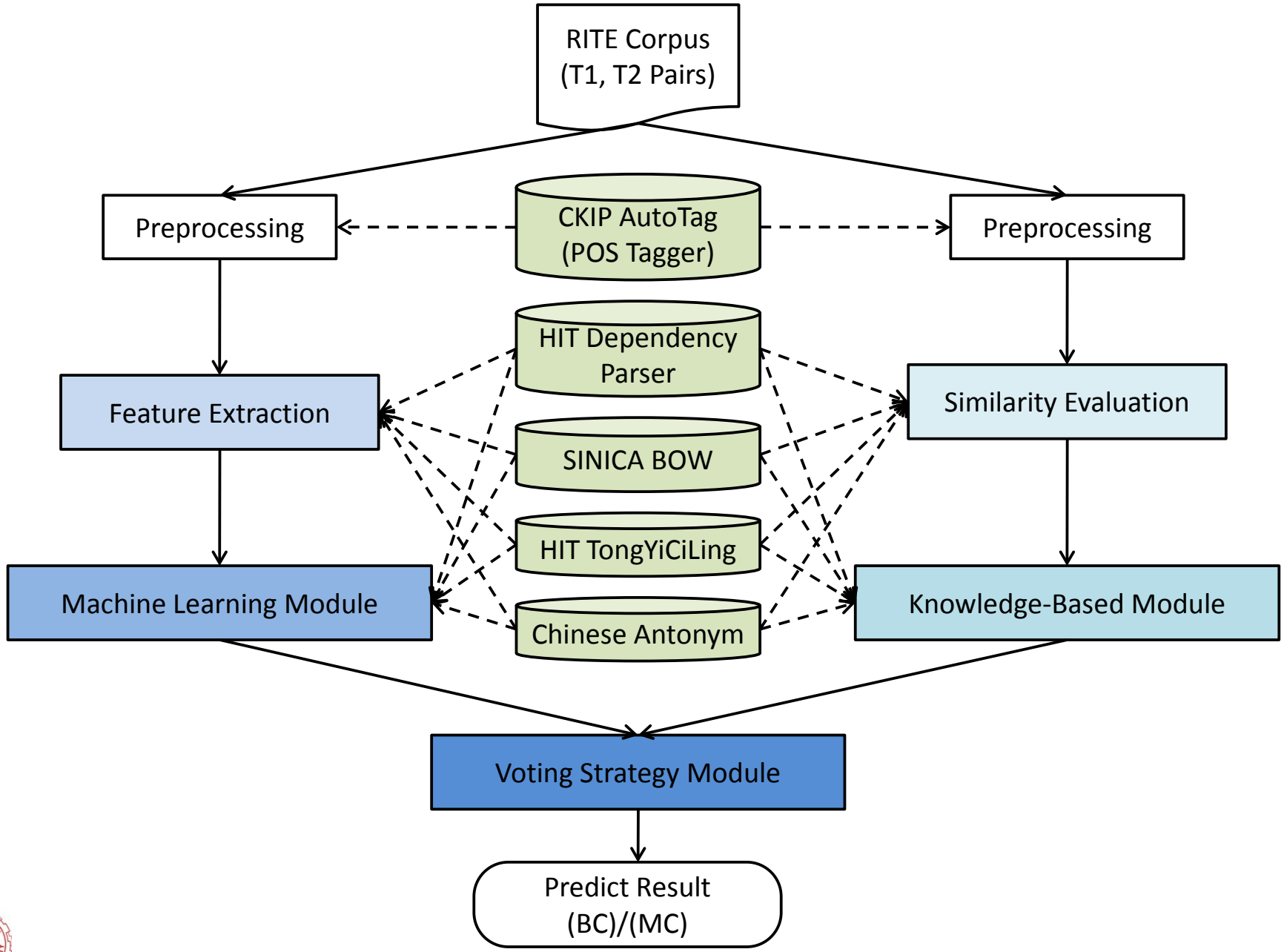
IEEE IRI 2013 Workshop Program

Session A13: Workshop on Empirical Methods for Recognizing Inference in Text (EM-RITE)

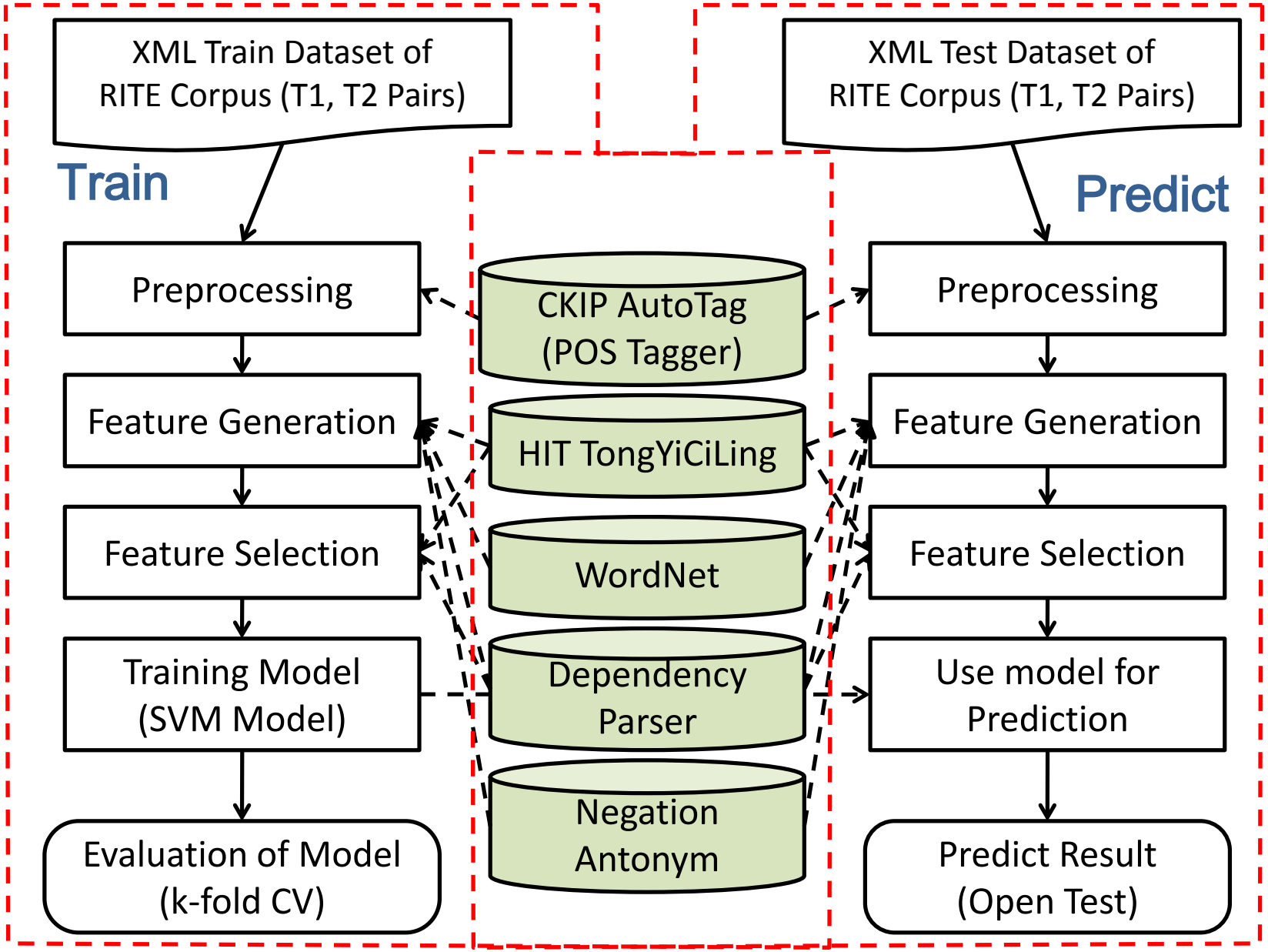
Chair: Min-Yuh Day

- Rank Correlation Analysis of NTCIR-10 RITE-2 Chinese Datasets and Evaluation Metrics
  Chuan-Jie Lin [(1)], Cheng-Wei Lee [(2)], Cheng-Wei Shih [(2)] and Wen-Lian Hsu [(2)]
  [(1)] National Taiwan Ocean University, Taiwan
  [(2)] Academia Sinica, Taiwan
- Chinese Textual Entailment with Wordnet Semantic and Dependency Syntactic Analysis
  Chun Tu and Min-Yuh Day
  Tamkang University, Taiwan
- Entailment Analysis for Improving Chinese Textual Entailment System
  Shih-Hung Wu [(1)], Shan-Shun Yang [(1)], Liang-Pu Chen [(2)], Hung-Sheng Chiu [(2)] and Ren-Dar Yang [(2)]
  [(1)] Chaoyang University of Technology, Taiwan
  [(2)] Institute for Information Industry, Taiwan
- Interest Analysis using Social Interaction Content with Sentiments
  Lun-Wei Ku and Chung-Chi Huang
  Academia Sinica, Taiwan
- Clustering and Summarization Topics of Subject Knowledge Through Analyzing Internal Links
  of Wikipedia
  I-Chin Wu, Chi-Hong Tsai and Yu-Hsuan Lin
  Fu-Jen Catholic University, Taiwan

IMTKU System Architecture for NTCIR-9 RITE



IMTKU System Architecture for NTCIR-10 RITE-2



Discussions

- Issues of Definition in RITE MC between NTCIR-9 and NTCIR-10:
  - Definition of NTCIR-9 MC subtask :
    - "A **5-way** labeling subtask to detect (forward / reverse / bidirection) entailment or no entailment (contradiction / independence) in a text pair."
  - Definition of NTCIR-10 MC subtask :
    - "A **4-way** labeling subtask to detect (forward / bidirection) entailment or no entailment (contradiction / independence) in a text pair."

IMTKU Experiments for NTCIR-10 RITE-2 Datasets

Datasets	10 Fold CV Accuracy
RITE2_CT_dev_test_bc_g.txt (RITE2 BC Dev + Test Dataset: 1321 + 881 = 2202 pairs)	68.85%
RITE1_CT_r1000_dev_test_bc_g.txt (Random select **1000 pairs** from RITE1 BC Dev+ Test Dataset)	**73.83%**
RITE1_CT_dev_test_bc_g.txt (RITE1 BC Dev +Test Dataset: 421 + 900 =1321 pairs)	72.29%
RITE1_CT_dev_bc_g.txt (gold standard) (RITE1 BC Development Dataset: 421 pairs)	72.21%

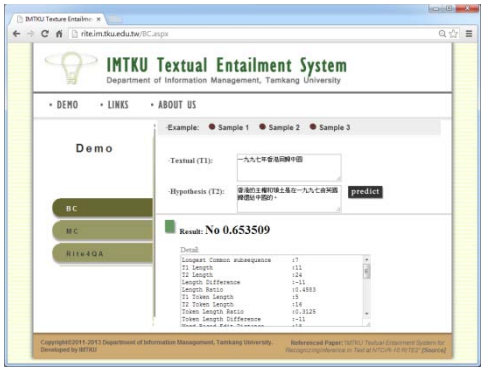
IMTKU Experiments for NTCIR-9 RITE Datasets

Datasets	10 Fold CV Accuracy
RITE1_CT_dev_bc_g.txt (gold standard) (BC Development Dataset: 421 pairs)	76.48%
RITE1_CT_test_bc_g.txt (BC Test Dataset: **900** pairs)	66.33%
RITE1_CT_dev_test_bc_g.txt (BC Dev+Test Dataset: 421+900 =**1321** pairs)	67.67%

Tamkang University

淡江大學

IMTKU Textual Entailment System for Recognizing Inference in Text at NTCIR-10 RITE-2



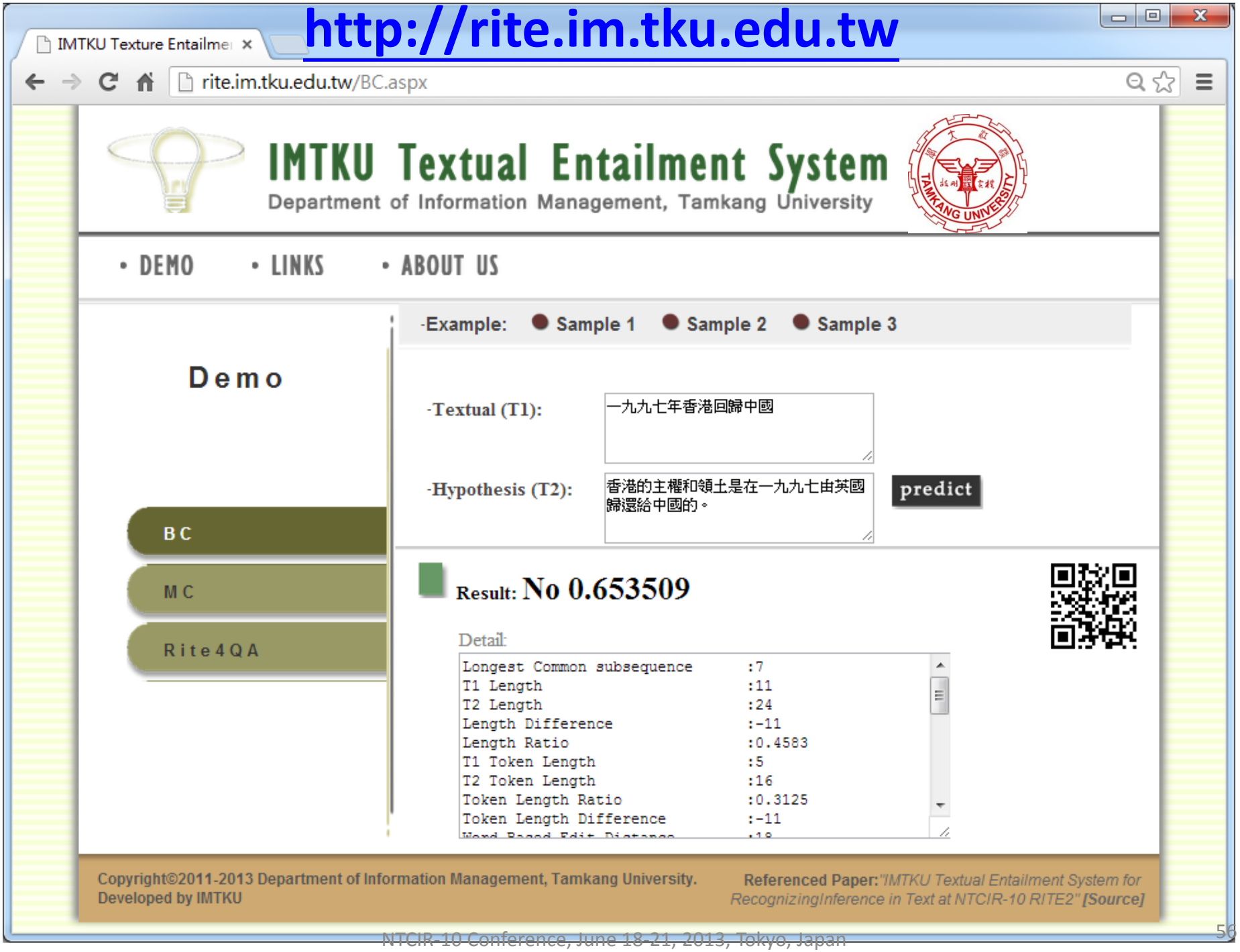
Demo

http://rite.im.tku.edu.tw

Min-Yuh Day *,
Chun Tu, Shih-Jhen Huang,
Hou-Cheng Vong, Shih-Wei Wu

myday@mail.tku.edu.tw

http://rite.im.tku.edu.tw



http://rite.im.tku.edu.tw

IMTKU Texture Entailme

rite.im.tku.edu.tw/BC.aspx

IMTKU Textual Entailment System

Department of Information Management, Tamkang University

• DEMO • LINKS • ABOUT US

Demo

- BC
- MC
- Rite4QA

-Example: Sample 1 Sample 2 Sample 3

-Textual (T1): 一九九七年香港回歸中國

-Hypothesis (T2): 香港的主權和領土是在一九九七由英國歸還給中國的。

predict

Result: No 0.653509

Detail:

```
Word Similarity                 :0.8747
Word Net Similarity             :18.55
Word Net Similarity Ratio       :23.0833333333333
Word Net Similarity Short       :30.3333333333333
Negation Number Difference      :0
Antonym Number Difference       :0
T1: 一九九七年香港回歸中國
T2: 香港的主權和領土是在一九九七由英國歸還給中國的。
T1 CKIP:   ?(QUESTIONCATEGORY)  一九九七年(N)  香港(N)
  回歸(Vt)  中國(N)
```


Referenced Paper:"IMTKU Textual Entailment System for RecognizingInference in Text at NTCIR-10 RITE2" [Source]

https://sites.google.com/site/emrite2013/

IEEE International Workshop on Empirical Methods for Recognizing Inference in TExt (IEEE EM-RITE 2013)

In conjunction with IEEE IRI 2013

San Francisco, USA
August 14, 2013

https://sites.google.com/site/emrite2013/

IEEE EM-RITE 2013

https://sites.google.com/site/emrite2013/

2013 IEEE International Workshop on Empirical Methods for Recognizing Inference in TExt

EM-RITE 2013

In conjunction with IEEE IRI 2013

San Francisco, USA
August 14, 2013

MENU

- Call for papers
- Important dates
- Organizing committee
- Paper Submission
- Workshop Program

LINKS

- IEEE IRI 2013
- IEEE EM-RITE 2013
- IEEE EM-RITE 2012

Sponsored by

Society for Information Reuse and Integration (SIRI)

Technically Co-Sponsored by

IEEE computer

Welcome to IEEE EM-RITE 2013

IEEE International Workshop on Empirical Methods for Recognizing Inference in TExt (IEEE EM-RITE 2013)

In conjunction with IEEE IRI 2013

San Francisco, USA
August 14, 2013

Textual Entailment and Paraphrase are inference tasks of natural language processing (NLP) for automatically detecting entailment, paraphrase, and contradiction in texts. The aim of this workshop is to provide a forum for original high-quality research contributions on empirical methods for recognizing inference in text as well as multidisciplinary research opportunities.

Topics of interest include but are not limited to practical areas that span a variety of aspects of empirical methods for recognizing inference in text including:

- Guidelines, standards, best practices and models for the construction and annotation of Textual Entailment datasets
- Evaluation of Knowledge Resources for Textual Entailment
- Recognizing Inference in Text
- Recognizing Textual Entailment

Conclusions

- Welcome to join **NTCIR-11 RITE-VAL**
- Online demo system **RITE.IM.TKU**
  - http://rite.im.tku.edu.tw
- Welcome to join **IEEE EM-RITE** 2014, 2015, …

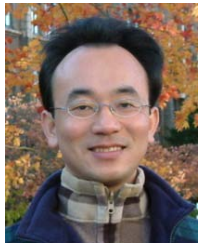
References

- Noriko Kando, Tsuneaki Kato, Douglas W. Oard and Mark Sanderson, Welcome, Proceedings of NTCIR-10, 2013, http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/pdf/NTCIR/00-NTCIR10-WELCOME-NKando.pdf
- Hideo Joho and Tetsuya Sakai, Overview of NTCIR-10, Proceedings of NTCIR-10, 2013
- Yotaro Watanabe, Yusuke Miyao, Junta Mizuno, Tomohide Shibata, Hiroshi Kanayama, Cheng-Wei Lee, Chuan-Jie Lin, Shuming Shi, Teruko Mitamura, Noriko Kando, Hideki Shima and Kohichi Takeda, Overview of the Recognizing Inference in Text (RITE-2) at NTCIR-10, Proceedings of NTCIR-10, 2013, http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/pdf/NTCIR/RITE/01-NTCIR10-RITE2-overview-slides.pdf
- Suguru Matsuyoshi, Yotaro Watanabe, Yusuke Miyao, Tomohide Shibata, Teruko Mitamura, Chuan-Jie Lin, Cheng-Wei Shih, Introduction to NTCIR-11 RITE-VAL Task (Recognizing Inference in Text and Validation), NTCIR-11 Kick-Off Event, September 2, 2013, http://research.nii.ac.jp/ntcir/ntcir-11/pdf/NTCIR-11-Kickoff-RITE-VAL-en.pdf
- Min-Yuh Day, Chun Tu, Shih-Jhen Huang, Hou-Cheng Vong, Shih-Wei Wu (2013), "IMTKU Textual Entailment System for Recognizing Inference in Text at NTCIR-10 RITE2," Proceedings of NTCIR-10, 2013
- Chun Tu and Min-Yuh Day (2013), "Chinese Textual Entailment with Wordnet Semantic and Dependency Syntactic Analysis", 2013 IEEE International Workshop on Empirical Methods for Recognizing Inference in Text (IEEE EM-RITE 2013), August 14, 2013, in Proceedings of the IEEE International Conference on Information Reuse and Integration (IEEE IRI 2013), San Francisco, California, USA, August 14-16, 2013, pp. 69-74.

Workshop on Emerging Trends in
Interactive Information Retrieval & Evaluations

Q & A

NTCIR Evaluation Activities: Recent Advances on RITE (Recognizing Inference in Text)



Min-Yuh Day, Ph.D.
Assistant Professor

Department of Information Management
Tamkang University

http://mail.tku.edu.tw/myday

Tamkang University