Overview of Information Access in Legal Domain
FIRE 2013

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Abstract

In FIRE 2013 we organized a pilot track 'Information access in the legal domain'. The main aim of this track was to initiate research on these topics which so far are not prevalent in the Indian setup. In this working note we describe in brief the task definition, benchmark dataset that we created and the response in terms of participation.

Task Definition

The track constituted of two major tasks

(1) Adhoc retrieval from legal documents. For ad-hoc retrieval we consider two domains (1)Consumer Law and (2)Hindu Marriage Act.

(2) Identification and Classification of Propositions in Court Judgement. Task-2 was further divided into two subtasks namely (a) Identification and (b)Classification.

The classification scheme for task 2(b) is given in the table below:

Scheme for classification of propositions		
No.	Category	Code
1	Fact	
1(a)	Intrinsic to the case	FI
1(b)	Extrinsic to the case	FE
2	Issue	I
3	Argument	A
4	Ruling by lower court	LR
5	General Standard of conduct	
5(a)	Statute	SS
5(b)	Precedent	SP
5(c)	Other general standards	SO
6	Ruling by present court	R

Dataset

The dataset was for task (1) comprised of judgements from four high courts,consumer court and the supreme court of India. 20 topics were given as queries for the task, 10 queries from consumer forums and 10 related to the Hindu marriage act. The queries were collected from various forums and represent the actual queries that people face in reality. There were in total 180000 judgments from the high courts and supreme court, while 170000 judgements were from the consumer court.

For the segmentation task 900 documents from the supreme court of India dated between 1980 and 1990 were provided as the corpus. Apart from that 10 manually segmented documents were also provided to be used as the training set. For the classification task we provided 10 manually segmented documents annotated with the actual category.

Participation

Considering that this was a pilot task we received a good response. Around 8 teams showed their interest in participation and 3 teams actually submitted the runs. Details of the participants are mentioned below:

Universidade de Evora, Portugal	Ad-hoc retrieval
Tata research development and design centre, Pune	Classification task
Indian school of mines, Dhanbad	Ad-hoc retrieval

There was no participation in the segmentation task.

Evaluation and results

For evaluation of task (1) we will consider standard M.A.P. value. The evaluation metric for task-2(a) is A_i as explained below:
where,

$$A_i = \sum_j \frac{\{P_{ij} \cap Q_{ij}\}}{\{P_{ij} \cup Q_{ij}\}}$$

P_{ij}: is the proposition number j of sentence number i in the original text.

Q_{ij}:is the proposition number j of sentence number i in the participants text.

The operations $\cup$ and $\cap$ denote intersection (finding the terms common to the two propositions) and union (finding the terms belonging to either of the two propositions. This measure will be calculated for each sentence in all the documents and the overall accuracies will be calculated using the micro average of these values

$$A_{overall} = \frac{\sum_{k=1}^{N} \sum_{i=1}^{M} A_{ki}}{NM}$$

where M is the total number of sentence in the document number k, and N is the total number of documents in the test collection.

For task 2(b) micro-precision and macro-precision will be considered. The relevance judgements are being computed and the results will be announce shortly.