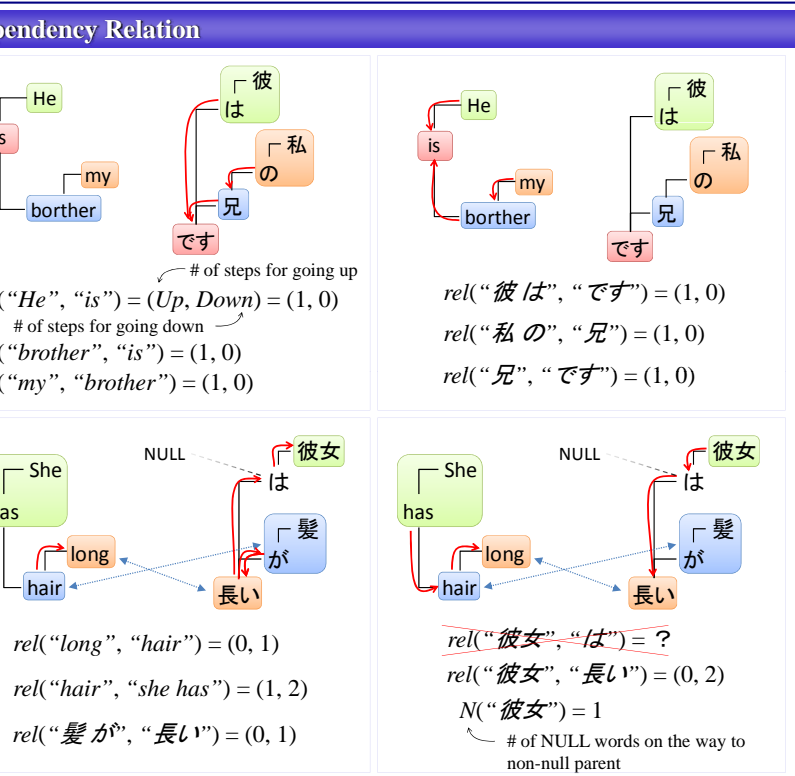
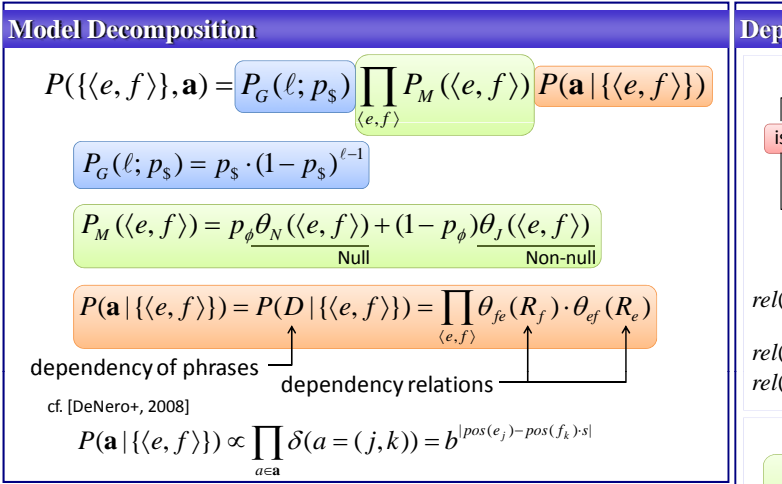
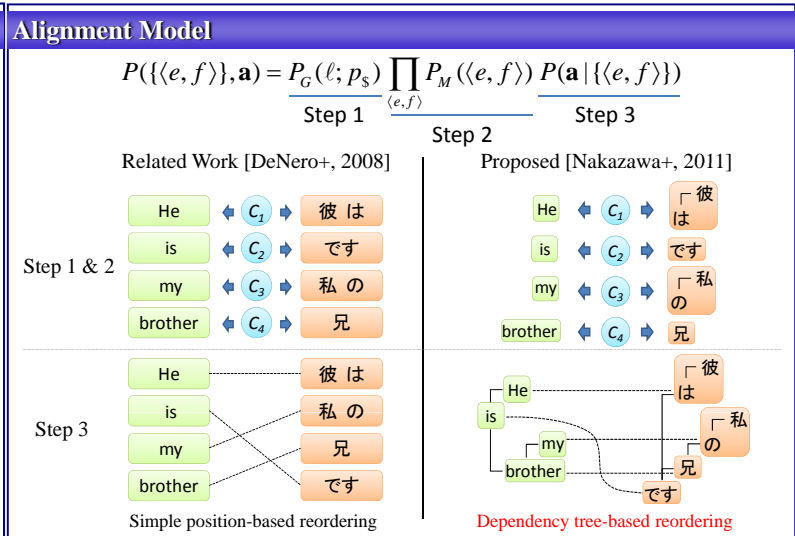
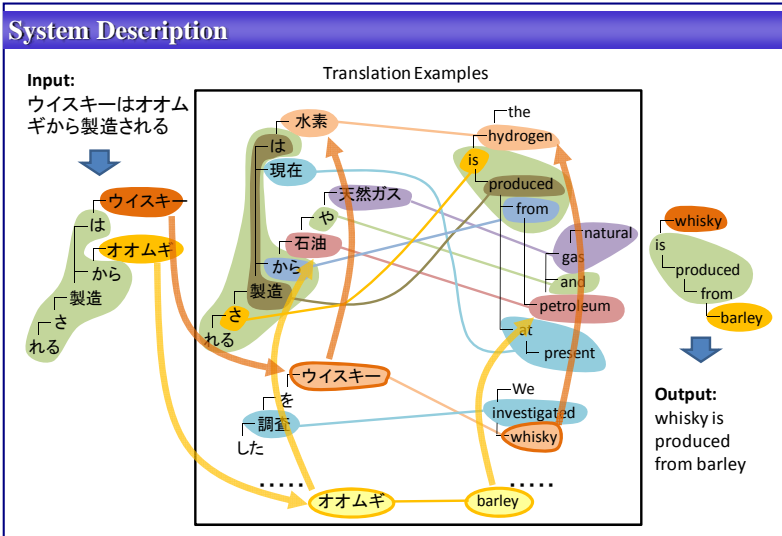


EBMT System of KYOTO Team in PatentMT Task at NTCIR-9

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- ### Model Training
- Initialization
 - Create heuristic phrase alignment like 'grow-diag-final-and' on dependency trees using results from GIZA++
 - Count phrase alignment and dependency relations
 - Refine the model by Gibbs sampling
 - Operators: SWAP, TOGGLE, EXPAND

NTCIR-9 PatentMT Results

	Japanese -> English			English -> Japanese			Chinese -> English	
	BLEU	Adequacy	Acceptability	BLEU	Adequacy	Acceptability	BLEU	Adequacy
Baseline 1	28.95	2.62	0.474	31.58	2.60	0.47	30.72	3.29
KYOTO (official)	21.14	2.38	0.436	24.52 23.90*	2.05	0.40	17.80	2.41
KYOTO (fixed)	23.01	N/A	N/A	25.58*	N/A	N/A	N/A	N/A

- Found bugs in official results!
 - Available translation examples are not fully extracted
 - Not all combinations of the examples are investigated
- Bug fixed version of KYOTO system is competitive to others
- Human evaluation results should be much better than the official ones (BLEU tends to underestimate EBMT results)

Translation Samples

Input: 図 30 において、図 27 及び 図 29 と同一の要素は同一の参照番号で参照し、その説明は省略する。

Output: In FIG. 30, the same elements as those of FIGS. 27 and 29 are referred to by the same reference numerals, and a description thereof will be omitted.

Input: そして、第1ウォータージャケット35a内の冷却水は、第1冷却水流出口35cを通じて、第1ウォーターマフラー63内の排気へ供給される。

Output: The cooling water in the first water jacket 35a is supplied to the inhibits the exhaust gas in the water first muffler 63, way the first cooling water outlet 35c.

Input: The outputs of the above sensors are supplied to an engine control unit (ECU) 27.

Output: 以上の各センサの出力は、エンジン制御回路(以下「ECU」と表記する)27に供給される。

Input: The polarization converter 414 converts the light from the second lens array 413 into uniform linear polarized light, thereby enhancing the light utilization efficiency of the optical device 44.

Output: 偏波変換器414は、第2レンズアレイ413からの光を均一な直線偏光に変換するものであり、これにより、光学装置44での光の利用効率が高められている。