

Overview of LIG system

- Fourth participation to IWSLT
- A/E BTEC task + E/F TALK task
- Phrase-based systems using Moses+Giza+Srlm
- Focus on the TALK task this year
 - Translation of ASR output (TALK)

Name	Condition 1		Condition 2		Condition 3	
	BLEU	TER	BLEU	TER	BLEU	TER
X	0,1519	0,698	0,1835	0,7208	0,2027	0,6874
Y	0,1623	0,6923	0,1737	0,7245	0,1908	0,6946
Z	0,1554	0,7027	0,181	0,7294	0,1992	0,6961
LIG_P	0,1634	0,7017	0,1733	0,7279	0,1903	0,6988
A	0,1582	0,7115	0,1689	0,7343	0,1827	0,7092
B	0,159	0,7092	0,1694	0,7401	0,1849	0,7131
C	0,1342	0,7153	0,1482	0,7452	0,1668	0,7143
D	0,1213	0,7187	0,1484	0,7353	0,1648	0,7089



A/E BTEC Task

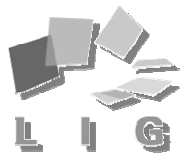
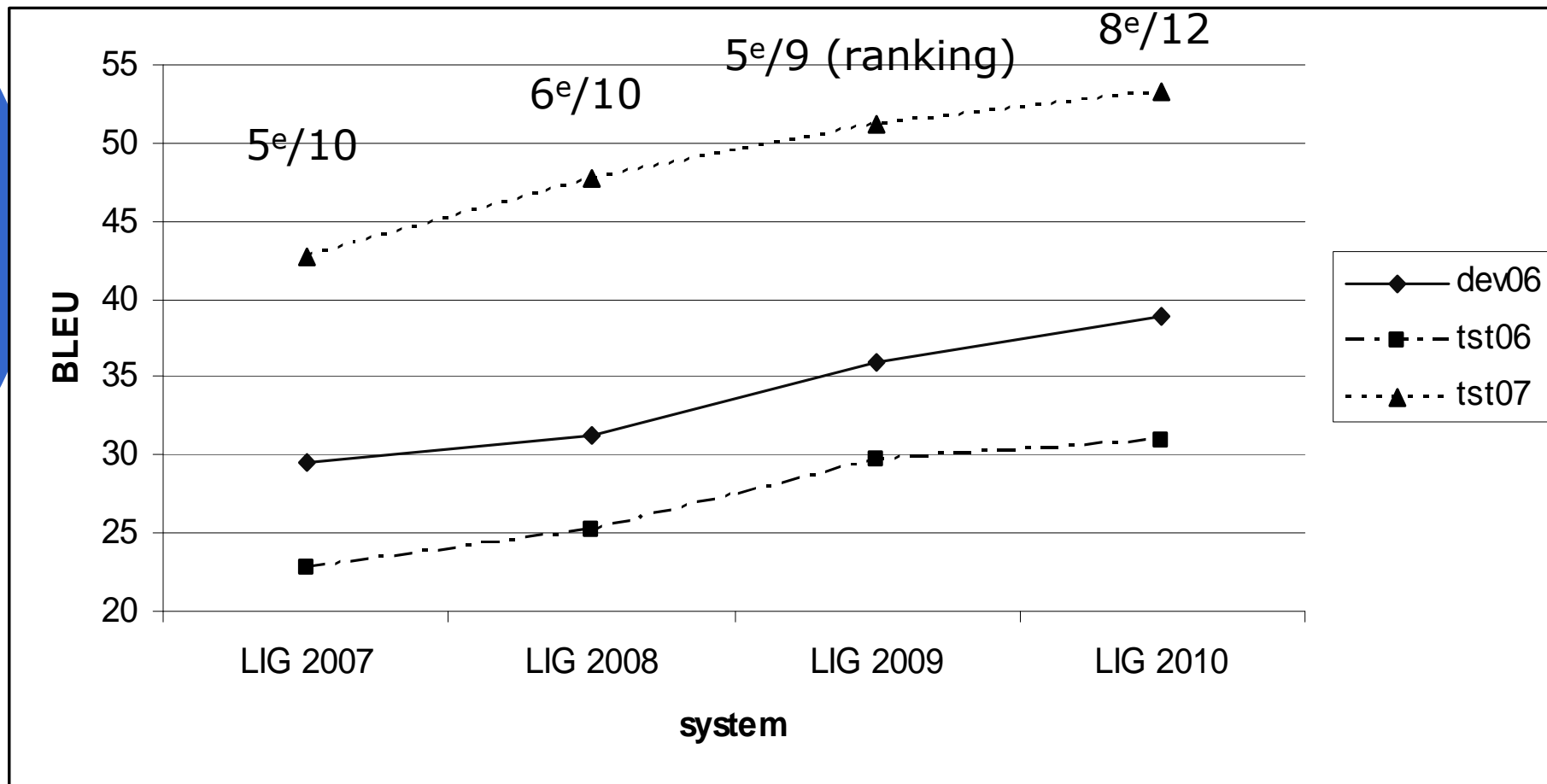
	dev06	tst06	tst07	tst08
Best Hierarchical phrase based system	37,85	29,19	54,03	52,52
Best Phrase Based system	36,56	29,16	51,49	50,77
System combination	38,91	30,94	55,35	53,27

Example of rules extracted for the H-PB system

[X][X] تحتفظ ب امتعت ي [X]	[X][X] keep my baggage [X]
[X][X] تحجز [X][X] غرفة [X]	[X][X] get [X][X] room [X]
[X][X] احجز [X][X] رحلة [X][X] بعد [X]	reserved [X][X] [X][X] flight yet [X]



LIG on BTEC A/E task over the past years



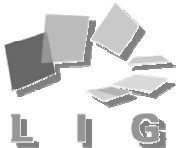
LM and Pre/post processing

■ Pre/post processing

- Data lowercased and tokenized but punctuation kept for LM and TM
- SMT-based recaser

■ LM

- 3g, KN discount
 - LM1 : $0.5 * \text{TED47k} + 0.5 * \text{NEWS15M}$
 - LM2 : $0.5 * \text{TED47k} + 0.5 * (\text{NEWS} + \text{EU} + \text{UN})24\text{M}$



Translation of References

System	LM	BLEU no-punct	BLEU punct
Baseline	LM1	0.2410	0.2461
+mp	LM1	0.2414	0.2470
+mp+postp	LM1	0.2414	0.2592
+mp+postp+UN	LM1	0.2393	0.2581
+mp+postp+PTprune(no mert)	LM1	0.2407	0.2582
+mp+postp+PTprune(mert)	LM1	0.2507	0.2676
+mp+postp+PTprune(mert)	LM2	0.2495	0.2684
+mp+postp+PTprune(mert)+resamp.	LM2	0.2483	0.2680
+mp+postp+PTprune(mert) + gluing full sentences before	LM1	0.2502	0.2674

- do not reorder over punctuation (+mp)
- refine punctuation after trans. using source (+postp)
- add UN data for MT (+UN)
- phrase-table pruning [Johnson, 2007] (+PTprune)
- give more weight to the TED data (+resamp)



Translation of ASR output

- **Re-punctuating the English 1best ASR before translation (LM+hidden-ngram)**

Repunct.	bleu(p+c)	bleu(c)	bleu(x) ¹
1: no	0.1402	0.1465	0.1657
2: LM (TED)	0.1445	0.1475	0.1670
3: LM (TED+Europarl+News)	0.1475	0.1504	0.1698
4: (3) + MERT(1best)	0.1462	0.1521	0.1720

- **Re- segmenting the English 1best ASR output**
 - Results reported in the paper
 - No significant differences on BLEU
 - Human evaluation would be useful (future work)



