

# Multi-source translation

Quite an old idea (e.g. Och & Ney 2001)

Table 4: Absolute improvements in WER combining two languages using method MAX compared with the best WER obtained by any of the two languages.

	fr	pt	es	it	sv	da	nl
fr	0.0	1.5	1.2	0.5	2.7	1.9	0.8
pt		0.0	2.2	2.1	4.0	3.4	1.3
es			0.0	2.4	3.9	2.6	1.7
it				0.0	3.5	3.2	1.6
sv					0.0	2.7	1.7
da						0.0	4.3
nl							0.0

Table 5: Absolute improvements in WER combining two languages using method PROD compared with the best WER obtained by any of the two languages.

	fr	pt	es	it	sv	da	nl
fr	0.0	0.8	0.1	0.4	1.0	0.8	-0.2
pt		0.0	2.6	2.1	2.6	2.8	-0.1
es			0.0	2.4	3.4	3.7	1.1
it				0.0	1.9	3.0	0.3
sv					0.0	1.8	0.5
da						0.0	1.5
nl							0.0

Table 6: Language combination using method MAX.

languages	WER	PER
fr	55.3	45.3
fr+sv	52.6	43.7
fr+sv+es	<b>52.0</b>	<b>43.2</b>
fr+sv+es+pt	52.3	43.6
fr+sv+es+pt+it	52.7	44.0
fr+sv+es+pt+it+da	52.5	43.9

Table 7: Language combination using method PROD.

languages	WER	PER
fr	55.3	45.3
fr+sv	54.3	44.5
fr+sv+es	51.0	41.4
fr+sv+es+pt	50.2	40.2
fr+sv+es+pt+it	49.8	39.8
fr+sv+es+pt+it+da	<b>48.8</b>	<b>39.1</b>