input layer				arc word
Sys A	Sys B	Sys C	Sys D	
the	an	a	a	the
the	an	a	a	an
the	an	a	a	a
black	red	orange	green	black
black	red	orange	green	red
black	red	orange	green	orange
black	red	orange	green	green
cab	train	car	car	cab
cab	train	car	car	train
cab	train	car	car	car