

**Comment 01 on
ECCC TR96-039**

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Figure 1: Complexity Classes Surrounding SL.

On July 15, 1996 Eric Allender pointed out to us that it is known that $\text{DET} \subseteq \text{TC}^1$. Thus we can lower the link emanating from DET so that it now goes to TC^1 . That is,

$$\text{DET} \subseteq \text{TC}^1 \subseteq \text{NC}^2.$$

Eric also pointed out it is known that BPLP is contained in SC^2 . So in Figure 1 there should be an edge from BPLP to SC^2 .

Thanks Eric.

Problem 4.3: Symmetric Finite Automaton Acceptance (SFAA).

On September 8, 1996 Klaus-Jörn Lange pointed out to us that there is a mistake in our proof of membership for SFAA in SL. That is, our “proof” that the problem is in SL is not correct. Klaus-Jörn observed that a similar construction to what we give in fact proves the problem is NL-hard. The reduction is from STCON (directed s - t connectivity). Since SFAA is in NL, this shows the problem is actually NL-complete!

Thanks Klaus-Jörn.