

CMC Meeting Q3 2006

**PSP
enhancements
priorities**



**Maastricht
The Netherlands**

Oct. 11th -12th 2006

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PSP intrinsic model enhancements: ST priorities

- ▣ Priority 1: Back-bias effect/ vertical inhomogeneous doping effects
- ▣ Priority 2: Consistent C-V / I-V modelling for short-channel pocket devices / lateral inhomogeneous doping effects
- ▣ Priority 3: Thermal node

PSP extrinsic model enhancements: ST priorities

Priority 1: Number of fingers

 Nfing needed as a regular instance parameter

Priority 2: External resistances

 In current model, NQS flag activates NQS model, Rgate and Substrate network

Need of Differentiation between activation of parasitic resistance network (more pronounced for Mosfets close to nominal length) and NQS effect (more pronounced in longer channels)

 External resistances: gate, S/D, and bulk