



# **On some selected issues in VLSI Interconnect Layouts in the nanometer range**

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e i s • f h e • b e , h e e a i s e • f • - e i s i s • b e  
• u e d u d e • g e s • • i s a i s , i s

e a. T a g e i ce a d i e f i i, a d  
a a c a e d i e f i a c i i he i i, he b e c e  
i . i a S e e ee ha a he i a c a  
he i ce . Th gh he e i ac f acc a e b e e ga  
de a i i, E e de a i e i u he e-  
fe ed ch ce d e i h gh de Se e a ea i [1,  
8] a e ded ca ed d g a g d e be ee e  
e g h a d he i ce a h e g h ( ad i).  
A e e . he ce i f de f de a i a d  
he i . f L ea A ea a e d i c ed [12].



$\alpha^S$  ec e $\frac{Y}{4}$ de e he e g h $\frac{S}{5}$  f he  $\frac{A}{4}$   $\frac{M}{4}$  ,  
 $L A$  a d he Rec ea M  $\frac{S}{4}$  a g T ee (  $\frac{M}{4}$  ),  
 $\frac{1}{4}$  • g b $\frac{S}{5}$  e a •  $\frac{1}{5}$  c ea [16]:

$$O \frac{A}{4} 2. (\frac{S}{4} A) > (L A) > (\frac{S}{4} M) > \frac{(*MS)}{1.5}.$$

## 5. CROSSTALK DRIVEN GLOBAL ROUTING

O e f he  $\frac{A}{4}$  • c e  $\frac{S}{5}$  f VLSI de $\frac{S}{5}$  g he de e  $\frac{1}{4}$   $\frac{1}{4}$   
 $\frac{1}{4}$  c e g  $\frac{1}{4}$   $\frac{1}{4}$  a  $\frac{S}{5}$  g a e g  $\frac{Y}{4}$  S g a -  
 e g  $\frac{1}{4}$   $\frac{1}{4}$  f e a ec ed b $\frac{1}{4}$  c  $\frac{S}{5}$  a •  $\frac{1}{4}$  e d e • he g ea e  
 •  $\frac{1}{4}$   $\frac{1}{4}$  be ee e ac  $\frac{S}{5}$  a d he •  $\frac{1}{4}$  e  $\frac{1}{4}$   $\frac{1}{4}$  -  
 c ea $\frac{S}{5}$  ed • b  $\frac{1}{4}$  • f •  $\frac{1}{4}$  g ca ac a ce $\frac{S}{5}$ . The c  $\frac{S}{5}$  a  
 •  $\frac{1}{4}$  e f • he •  $\frac{1}{4}$  g ca ac a ce  $\frac{S}{5}$   $\frac{1}{4}$  a  $\frac{1}{4}$  •  $\frac{1}{4}$  de ed  
 a d e $\frac{S}{5}$  a ed he de a ed •  $\frac{1}{4}$  g  $\frac{S}{5}$  age  $\frac{1}{4}$  ce he e  
 e gh b l o d f  $\frac{1}{4}$  •  $\frac{1}{4}$  e ed • ha e a ea $\frac{S}{5}$  ab e  
 e $\frac{S}{5}$  • • •  $\frac{1}{4}$  g ca ac a ce. Fe b  $\frac{1}{4}$  f he g  
 • • g $\frac{1}{4}$  d - g de a ed • g  $\frac{S}{5}$  ed a d a  $\frac{1}{4}$  cha ge  
 • e  $\frac{1}{4}$   $\frac{1}{4}$  ed • a • ca  $\frac{S}{5}$  a e g •  $\frac{1}{4}$  ch a $\frac{S}{5}$  a •  $\frac{1}{4}$  g  
 cha e • a $\frac{S}{5}$  ch b • C •  $\frac{S}{5}$  a a da ce g • ba •  $\frac{1}{4}$  g  
 $\frac{1}{4}$   $\frac{1}{4}$  de ed [92, 93] • de •  $\frac{1}{4}$  e he he e  
 e b  $\frac{1}{4}$

The c  $\frac{S}{5}$  a d e g ba •  $\frac{1}{4}$  g • be  $\frac{1}{4}$   $\frac{1}{4}$  be f -  
 $\frac{1}{4}$  a ed a $\frac{S}{5}$ :  

$$G = (V, E),$$

$$C_1, C_2, \dots, C_n,$$

$$C_i, 1 \leq i \leq n.$$

The  $CCG$  • be  $\frac{1}{4}$   $\frac{1}{4}$  ed  $\frac{S}{5}$  g a •  $\frac{1}{4}$  age he  $\frac{1}{4}$  c  
 [92]. The  $\frac{S}{5}$   $\frac{S}{5}$  age  $\frac{S}{5}$  a e - b $\frac{1}{4}$  e  $\frac{1}{4}$  a •  $\frac{1}{4}$  g  
 $\frac{1}{4}$  e ha  $\frac{1}{4}$   $\frac{1}{4}$  e • a c  $\frac{S}{5}$  a e a • f he e  $\frac{1}{4}$ .  
 The •  $\frac{1}{4}$  g • ced • e • each e •  $\frac{S}{5}$   $\frac{S}{5}$  f a S e e ee  
 •  $\frac{1}{4}$   $\frac{1}{4}$  a d a $\frac{1}{4}$  e / ac a $\frac{1}{4}$  g • ce $\frac{S}{5}$ . I [92],  
 $\frac{1}{4}$   $\frac{1}{4}$  ha he • be  $\frac{1}{4}$  f a $\frac{1}{4}$  g g •  $\frac{1}{4}$  a $\frac{1}{4}$  e / ac  $\frac{1}{4}$   
 •  $\frac{1}{4}$   $\frac{1}{4}$  e c  $\frac{S}{5}$  a • e eg •  $\frac{1}{4}$  -ha d. Thi $\frac{1}{4}$  -  
 a ed he de $\frac{S}{5}$  g • f a he  $\frac{1}{4}$  c ha e  $\frac{1}{4}$   $\frac{1}{4}$  ha ha he  
 • ed e  $\frac{1}{4}$  a e e he a $\frac{1}{4}$  e  $\frac{1}{4}$  a d he de • f he ac  
 a $\frac{1}{4}$  g • e a $\frac{1}{4}$  e  $\frac{1}{4}$  cha ged. b a e e • be



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