

Hardware Modeling [VU] (191.011)

– WS25 –

Vectors and Bit String Literals (IEEE 1164)

Florian Huemer & Sebastian Wiedemann & Dylan Baumann

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Recall: 9-valued Logic and Resolution Functions

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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
Vector Types
Conclusion

- Boolean logic cannot express different driver strengths

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Vectors
IEEE 1164 Recap
Operators
Vector Types
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IEEE 1164 Recap
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Vectors
IEEE 1164 Recap
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IEEE 1164 Recap
Operators
Vector Types
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IEEE 1164 Recap
Operators
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- And when do you use which?

Logical Operators

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Vectors

IEEE 1164 Recap

Operators

Vector Types

Conclusion

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Vectors
IEEE 1164 Recap
Operators
Vector Types
Conclusion

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IEEE 1164 Recap
Operators
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IEEE 1164 Recap
Operators
Vector Types
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Vectors
IEEE 1164 Recap
Operators
Vector Types
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Vectors
IEEE 1164 Recap
Operators
Vector Types
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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
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Example: `and` operator

```
1 constant and_table : stdlogic_table := (  
2 -- U    X    0    1    Z    W    L    H    -  
3 -----  
4 ('U','U','0','U','U','U','0','U','U'), -- U  
5 ('U','X','0','X','X','X','0','X','X'), -- X  
6 ('0','0','0','0','0','0','0','0','0'), -- 0  
7 ('U','X','0','1','X','X','0','1','X'), -- 1  
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10 ('0','0','0','0','0','0','0','0','0'), -- L  
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12 ('U','X','0','X','X','X','0','X','X') -- -  
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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
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Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
Operators
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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
Operators
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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
Operators
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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
Operators
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IEEE 1164
Vectors

IEEE 1164 Recap

Operators

Vector Types

Bit Strings

Operators

Conclusion

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IEEE 1164
Vectors

IEEE 1164 Recap

Operators

Vector Types

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Operators

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IEEE 1164
Vectors

IEEE 1164 Recap

Operators

Vector Types

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IEEE 1164
Vectors
IEEE 1164 Recap
Operators
Vector Types
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Operators
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Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
Operators
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Vectors
IEEE 1164 Recap
Operators
Vector Types
Bit Strings
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Vectors
IEEE 1164 Recap
Operators
Vector Types
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std_ulogic vs. std_logic

564

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IEEE 1164
Vectors

IEEE 1164 Recap

Operators

Vector Types

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 - `std_logic_vector` subtype of `std_ulogic_vector` since VHDL 2008

Lecture Complete!