



UNIVERSITÉ DE
SHERBROOKE

PPMPMPMPMPMPMPMPMPMPMP05

Comment se déplace un signal?

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Comment se déplace un signal?

Par: Pascal-Emmanuel Lachance &
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- Où l'impédance est la plus faible?
- ↻ Retour de courant
- Vitesse de déplacement d'un signal
- ⚡ Tout est une ligne de transmission

Surface Ripple

- Surface Ripple
 - Mouvements de charge
 - Champs EM
 - Ligne Hydro-Québec
- Return Paths
- Impédances et Réflections
- Building Blocks
- Noise
- Crosstalk & Coupling
- Field lines and Fringes

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 - Ground planes
 - Current loops
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Impédances et Réflexions

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 - Transmission Line
 - Impedance Mismatch
 - Réflexion
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Building Blocks

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- Building Blocks
 - Stubs
 - Waveguide
 - Antennes
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Noise

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 - Eye diagram
 - Harmoniques
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Crosstalk & Coupling

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- Crosstalk & Coupling
 - Paire différentielle
 - Far crosstalk
 - Near crosstalk
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 - B-field
 - Skew, loss
 - Skin effect

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 - Conduction
 - Loss tangent

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Waveform Abyss

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S parameters and Smith Charts

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Non-linearity

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Merci!

Prochain PPMPP

Bonnes pratiques de design

- Comment choisir ses composants et optimiser son BOM?
- Comment bien concevoir un symbole et un footprint?
- Bonnes pratiques de schémas
- Bonnes pratiques de layout
- Communication avec fabricants, assembleurs et programmeurs

