



UNIVERSITÉ DE
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PPMPMPMPMPMPMPMPMPMPMP05

Comment se déplace un signal?

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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

Level 1: Surface Ripple

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 - EM Fields I
 - Radiation I
 - Superposition I
 - Charge Movement
 - Harmonics I
- Level 2: Current Paths
 - Propagation Speed
 - Ground planes
 - Current loops
 - Induction
 - Fil d'une année lumière de long

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- Level 3: Impedance & Reflection
 - Impédances
 - Transmission Line
 - Impedance Mismatch

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 - Réflexion
- Level 4: Noise
 - Decibel Review
 - Noise Spectrum
 - Harmonics II
 - Signal to Noise Ratio (SNR)

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 - Jitter
 - Eye diagram
- Level 5: Crosstalk & Coupling
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- Level 6: Building Blocks
 - Stubs
 - Waveguide
 - Antennas

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- Level 7: Field lines and Fringes
 - E-field
 - B-field
 - Skew, loss
 - Skin effect
 - EMI

Level 7: Field lines and Fringes

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 - Loss tangent
 - Frequency-dependant resistances
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 - Modulation

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 - Standing Waves

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 - Distortion harmonique
 - Intermodulation
 - Crossmodulation

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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

