

Structured Electronic Design

Application of Negative Feedback in Amplifier Design

Anton J.M. Montagne

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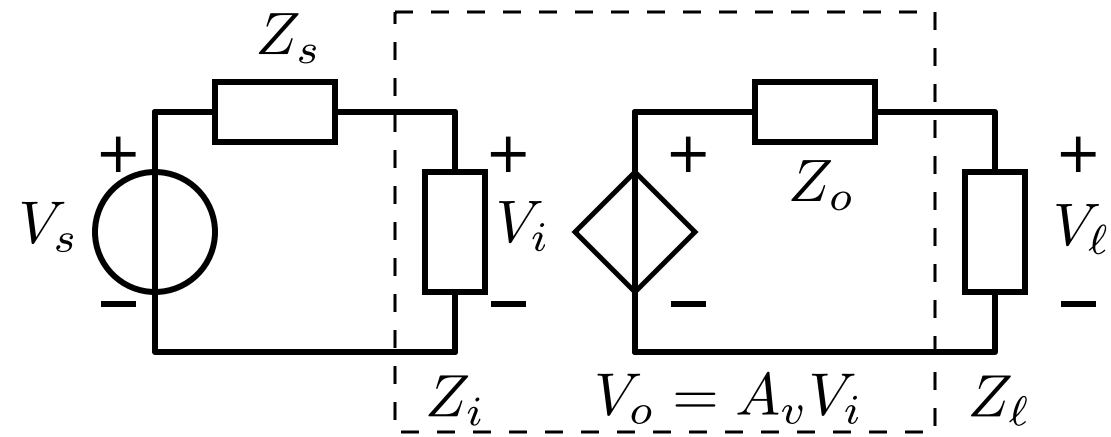
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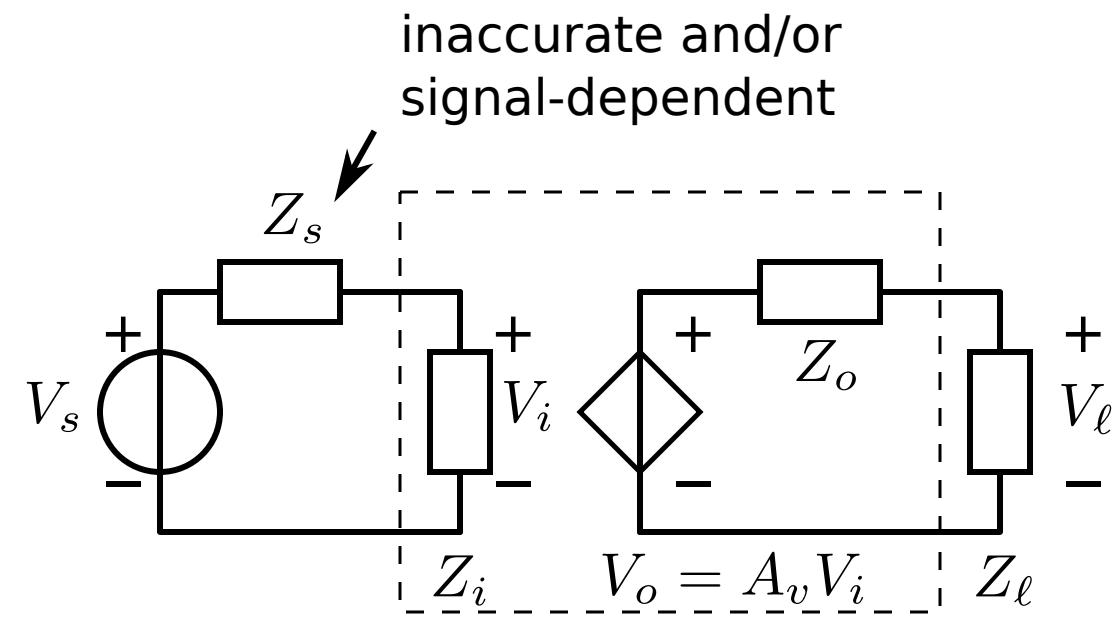
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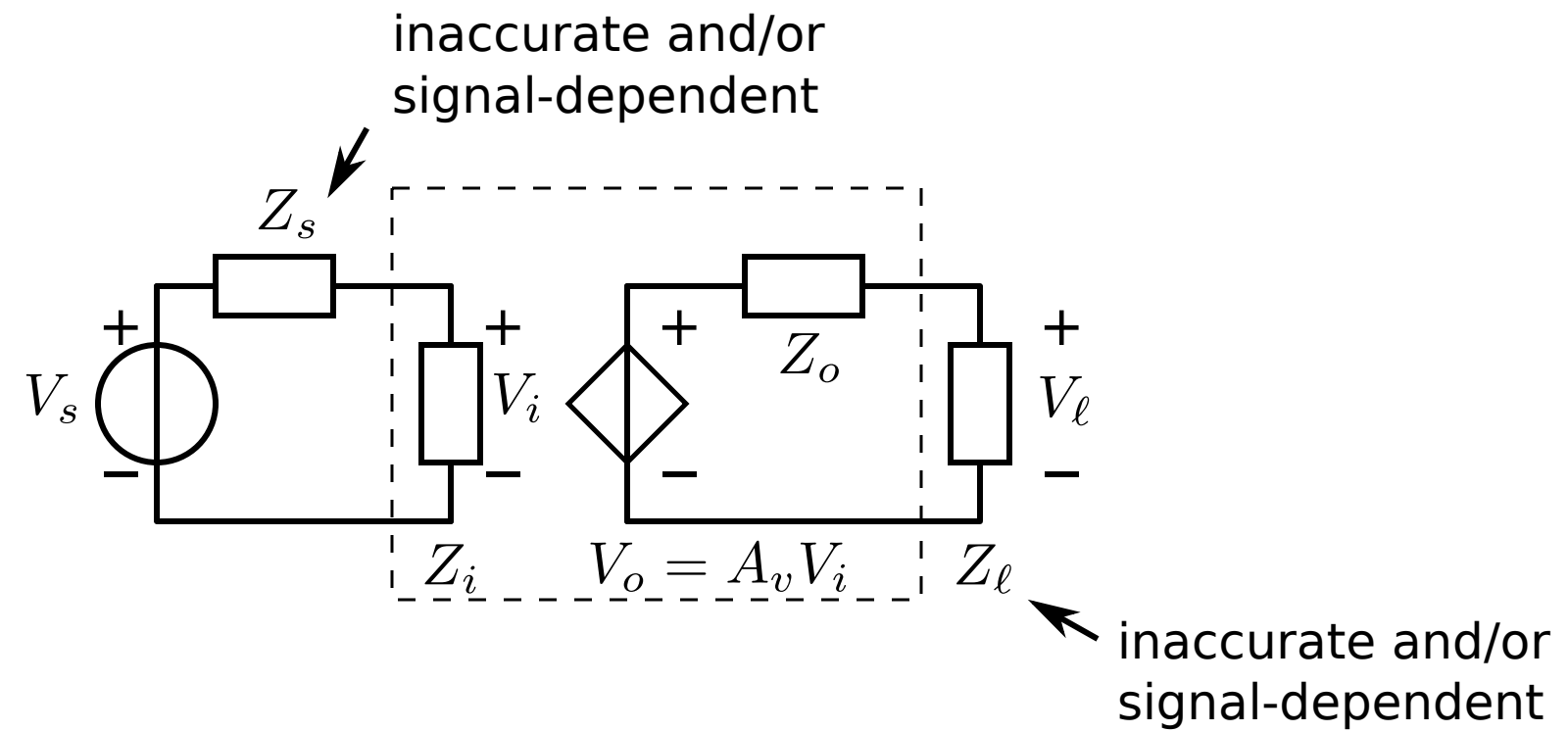
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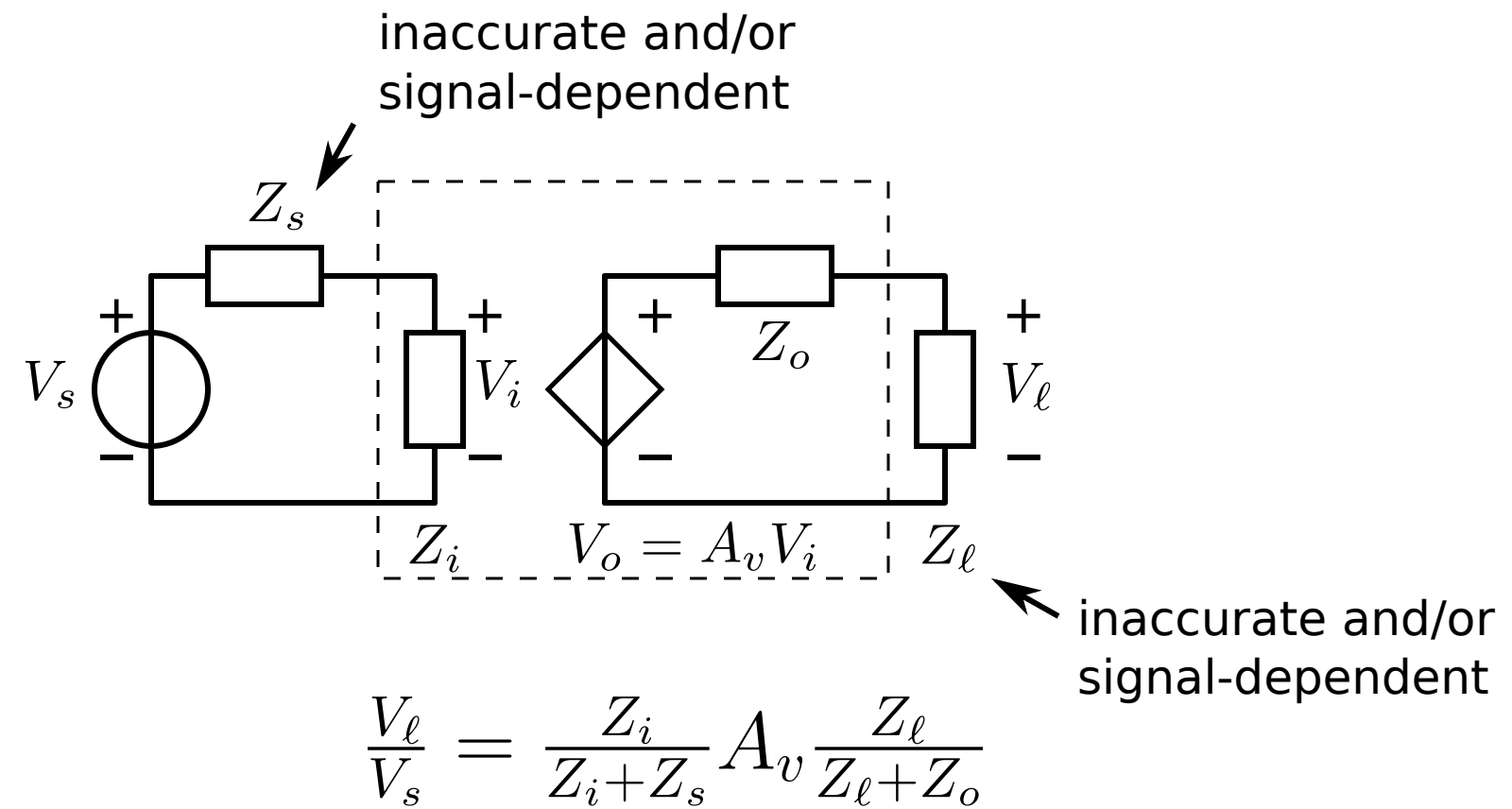
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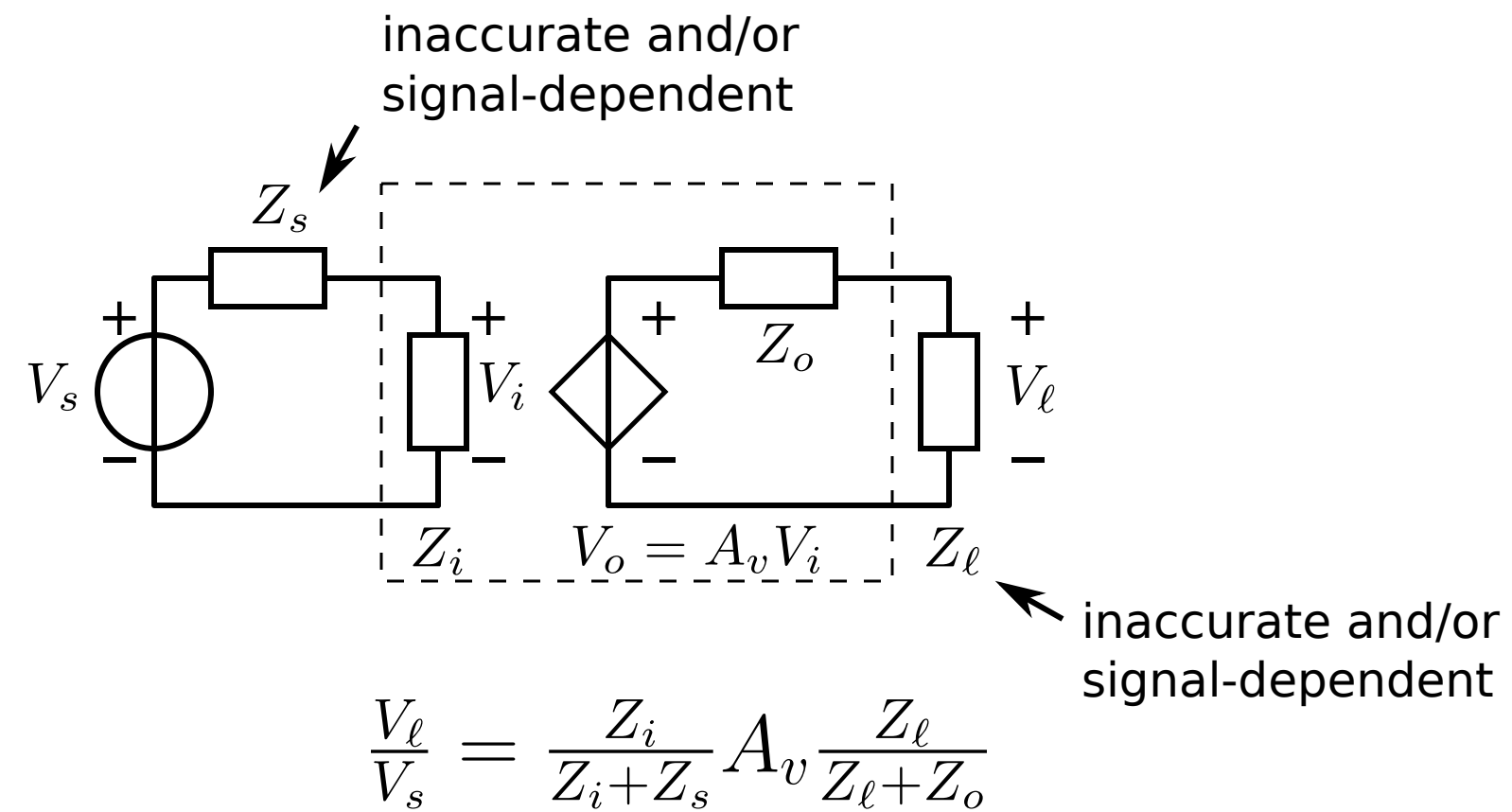
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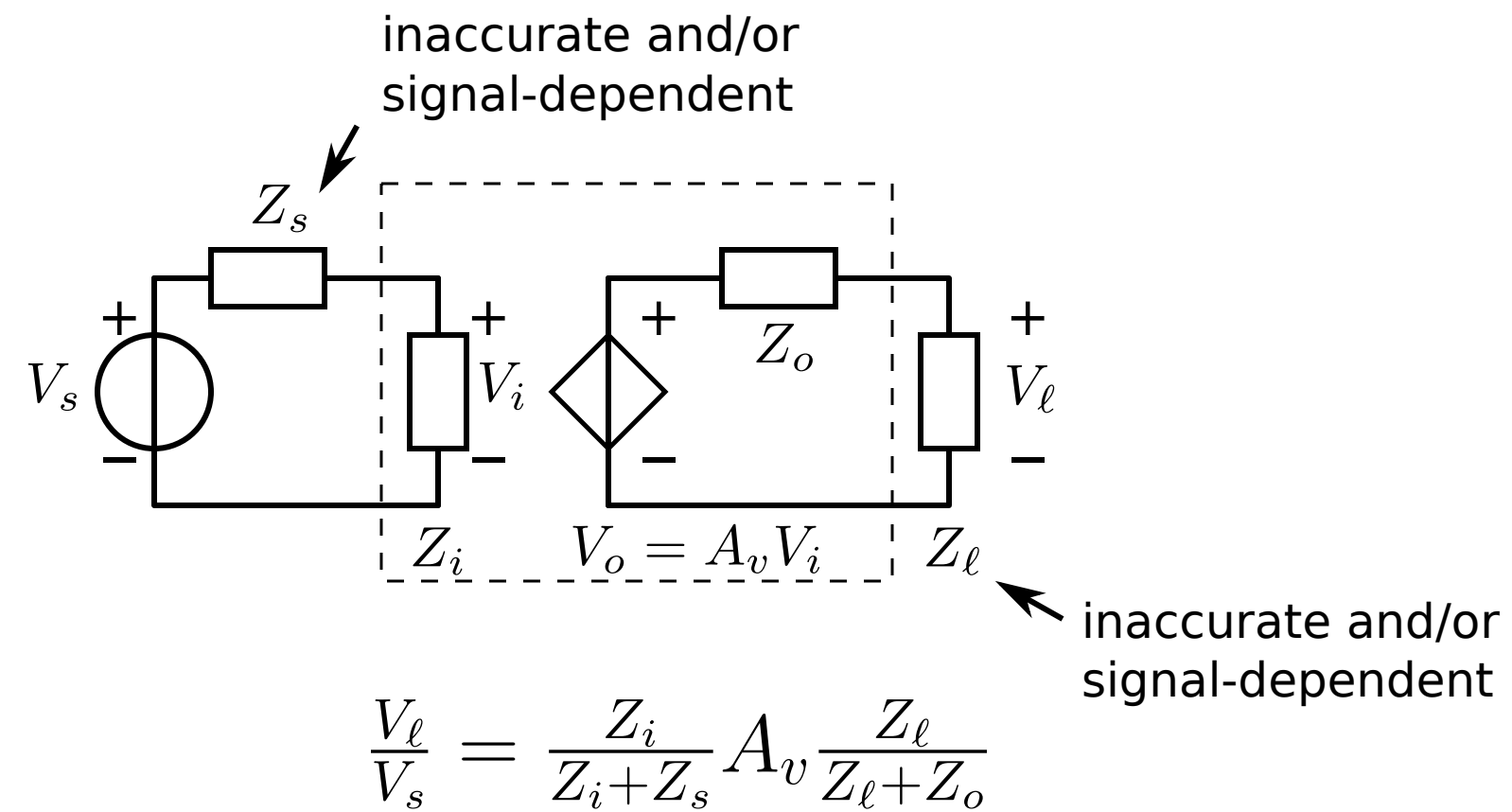


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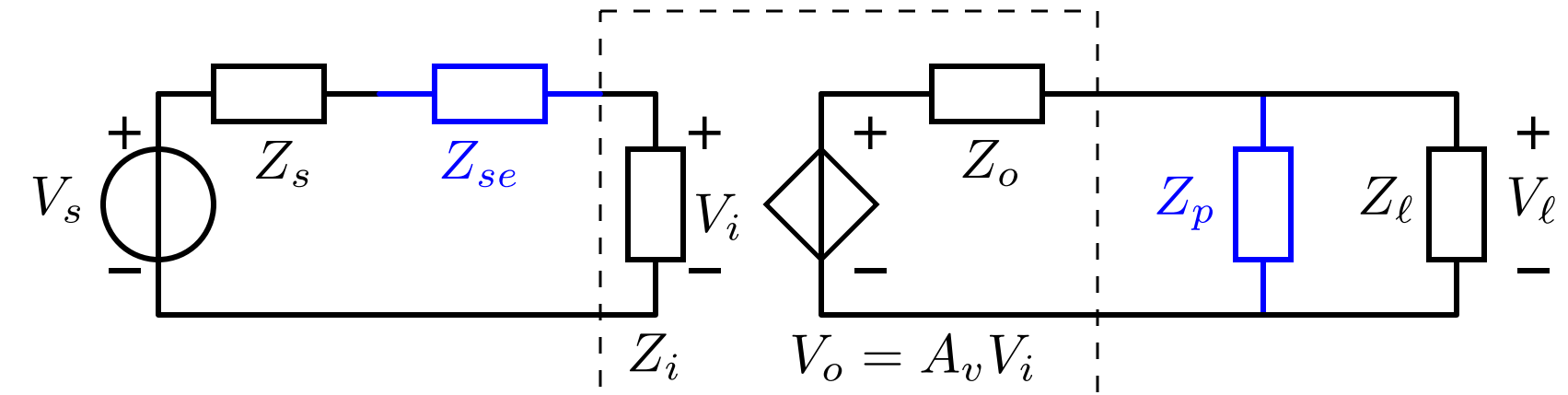


Brute-force: Insert **dominant**, high-accuracy and linear impedances in the signal path:

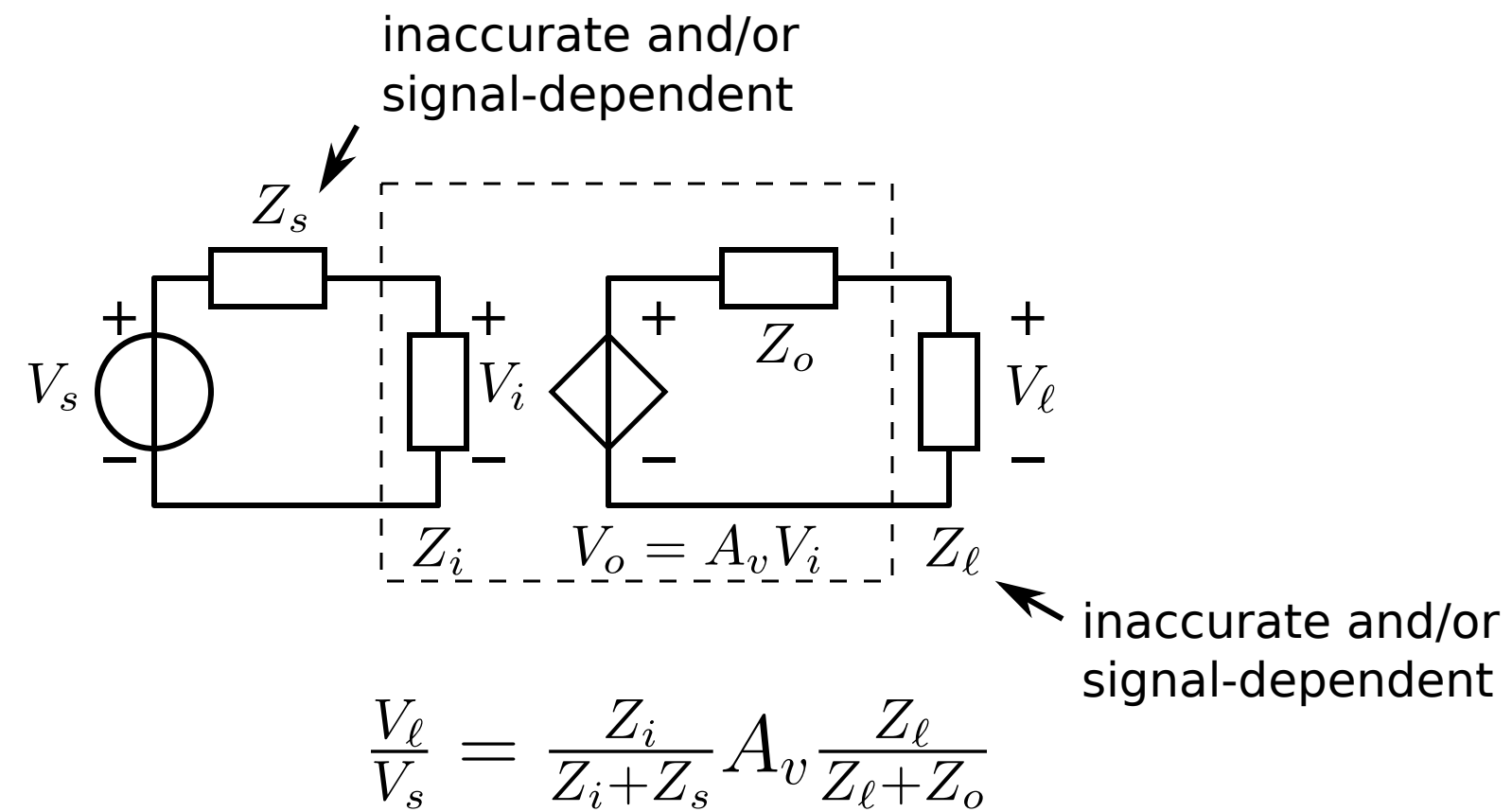
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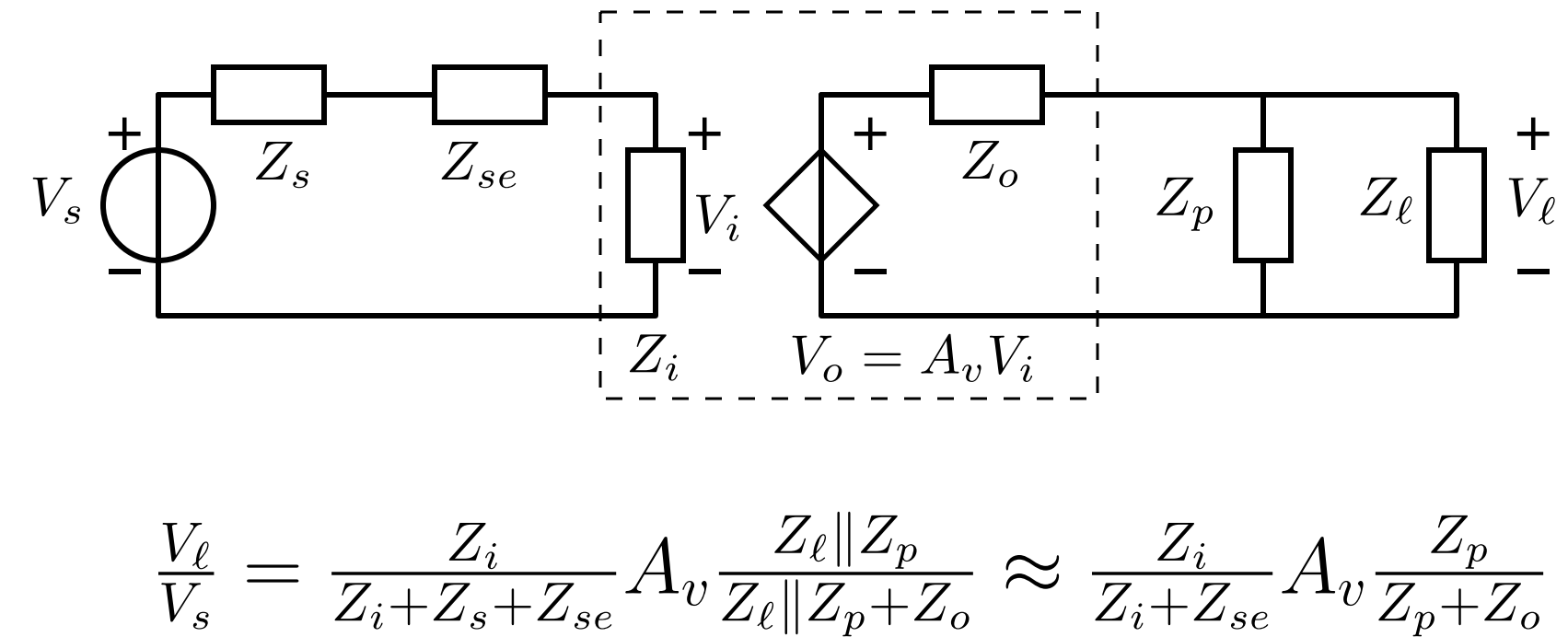
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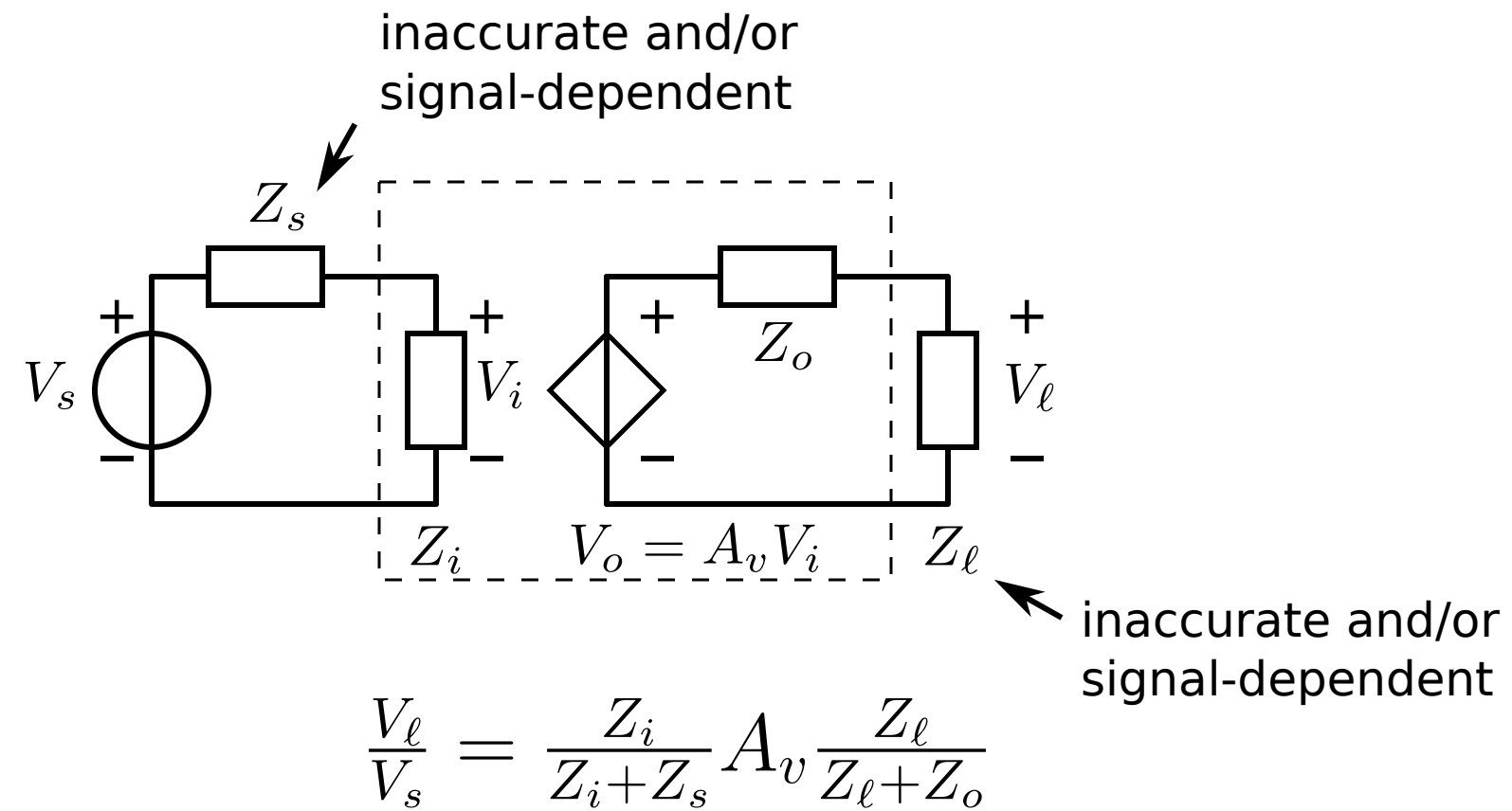
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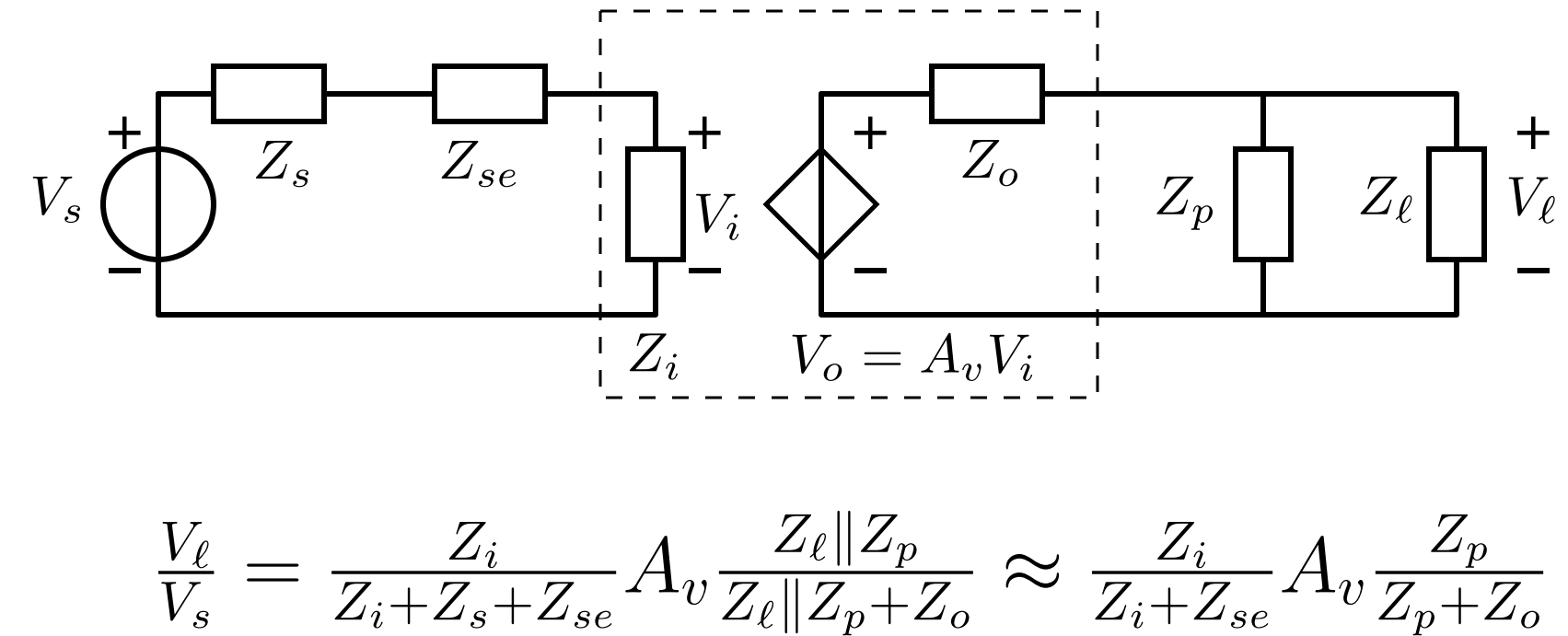
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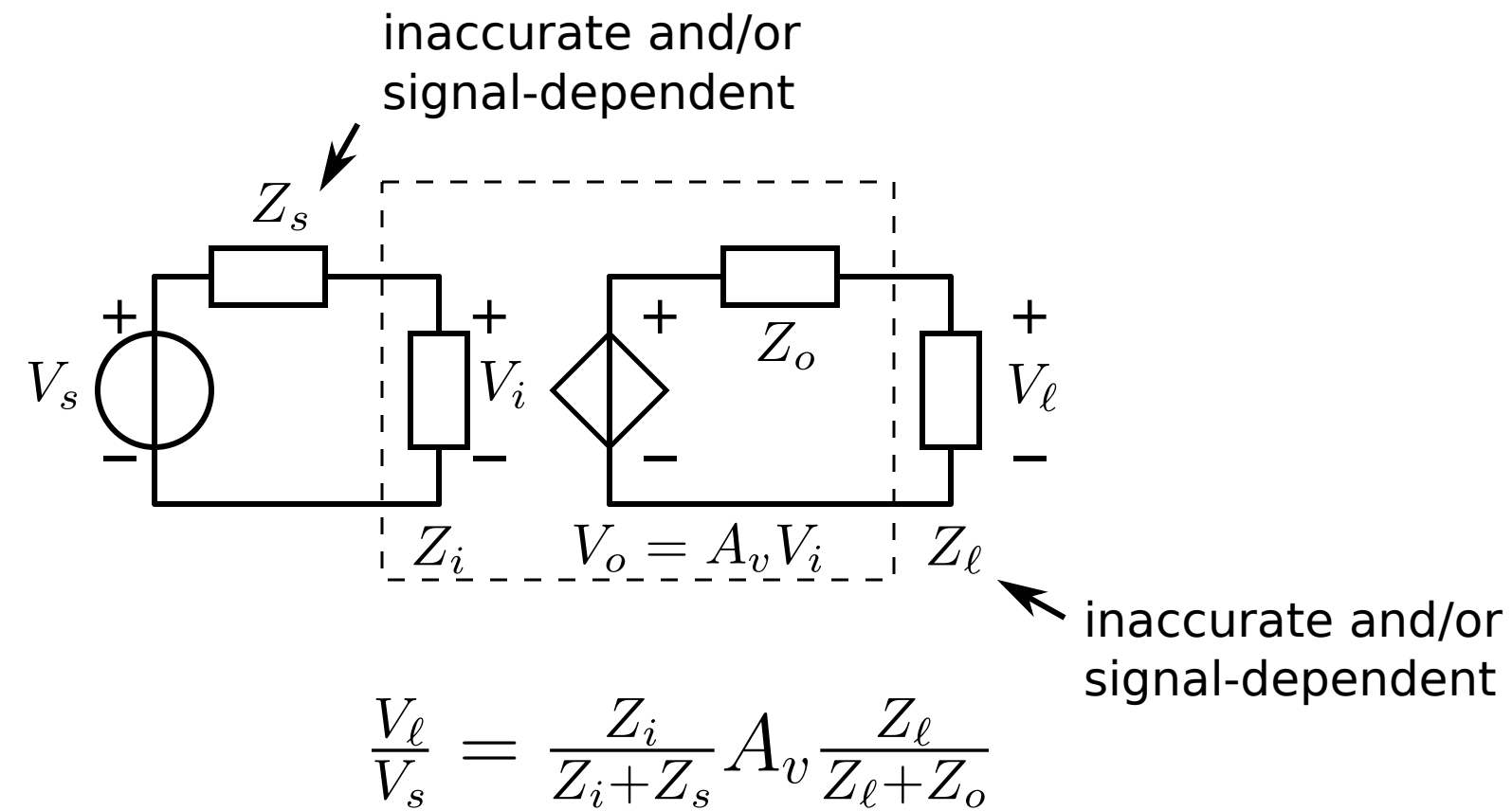


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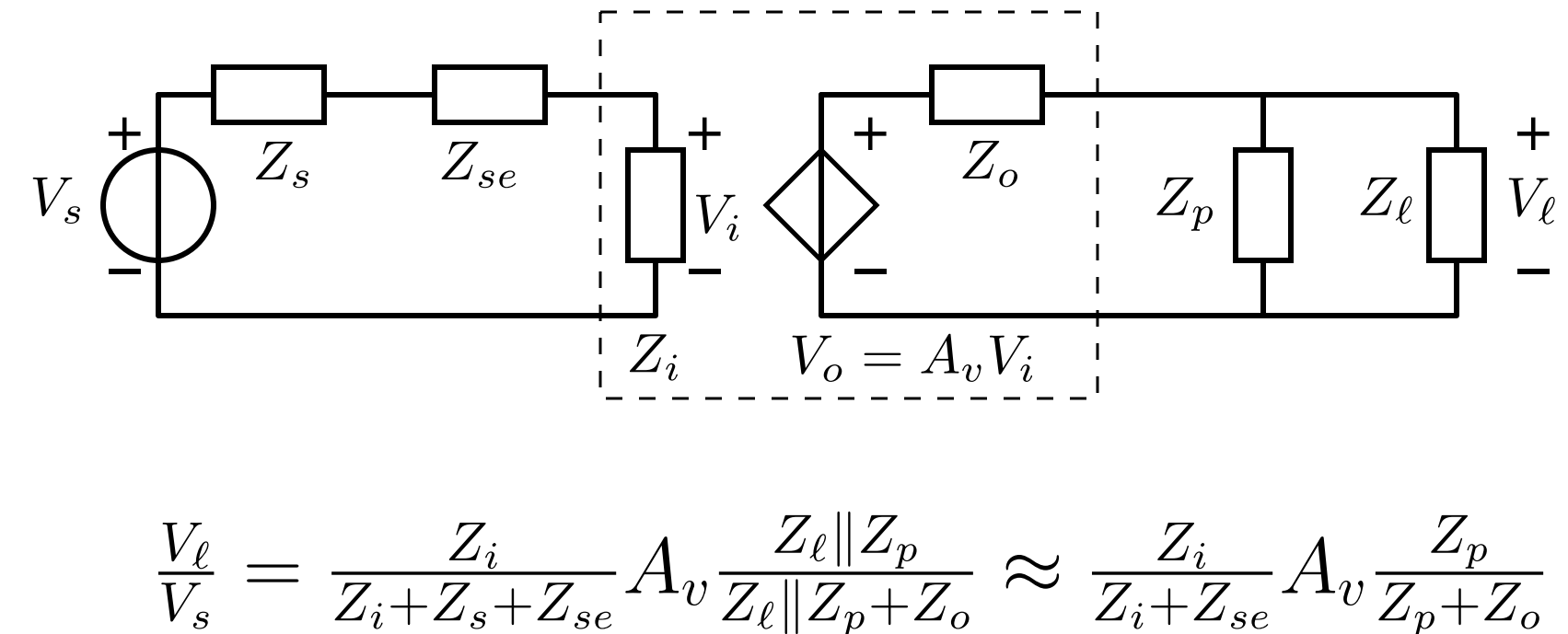
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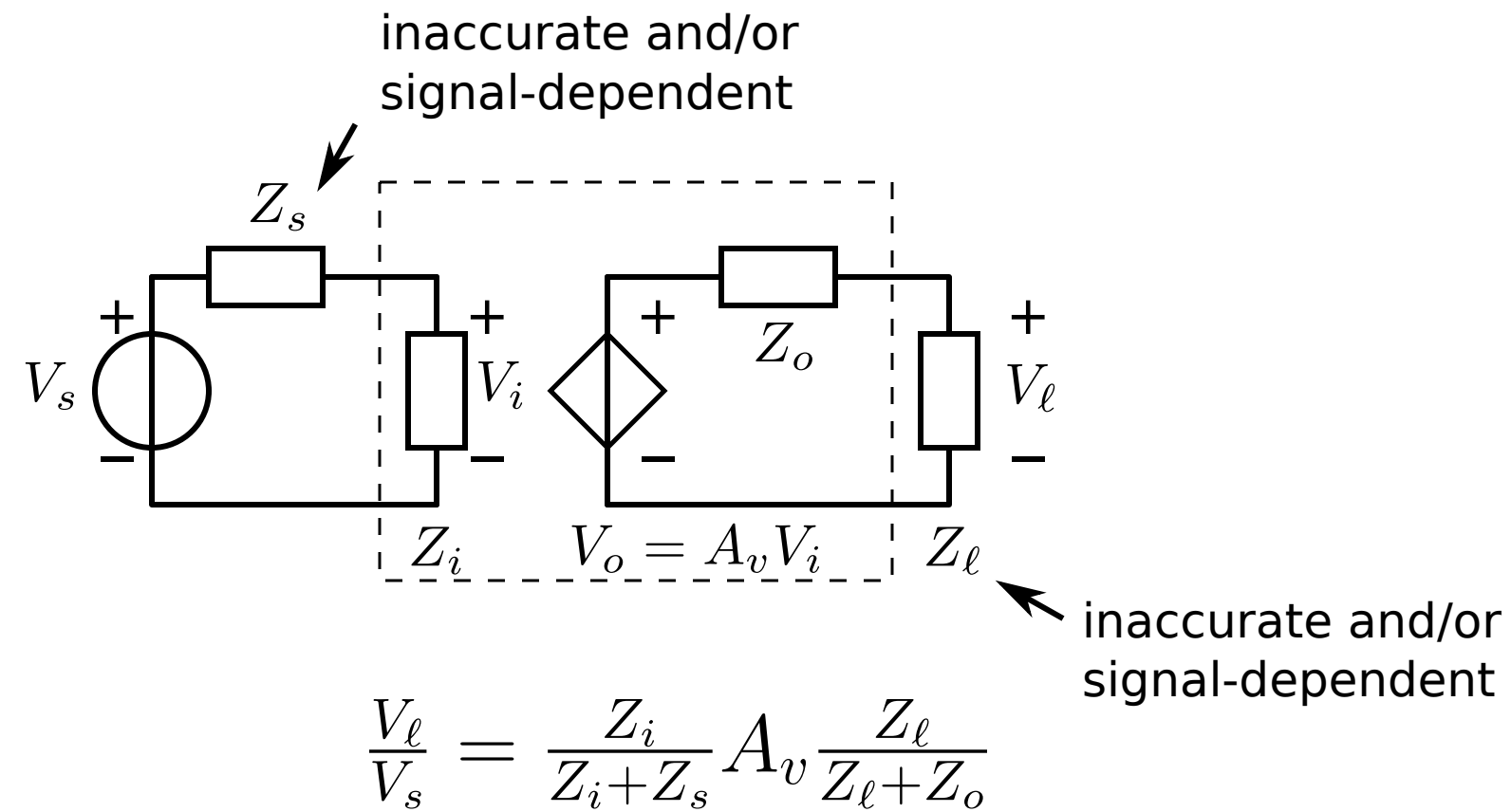
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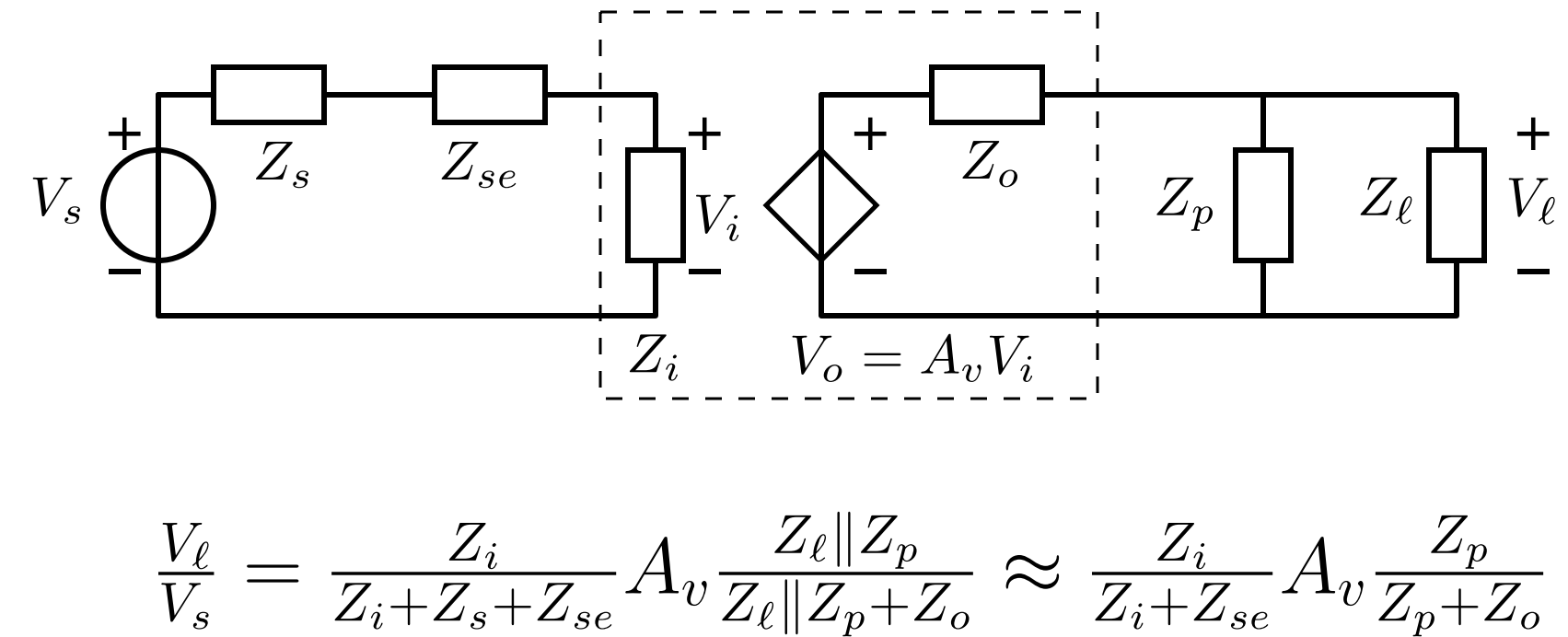
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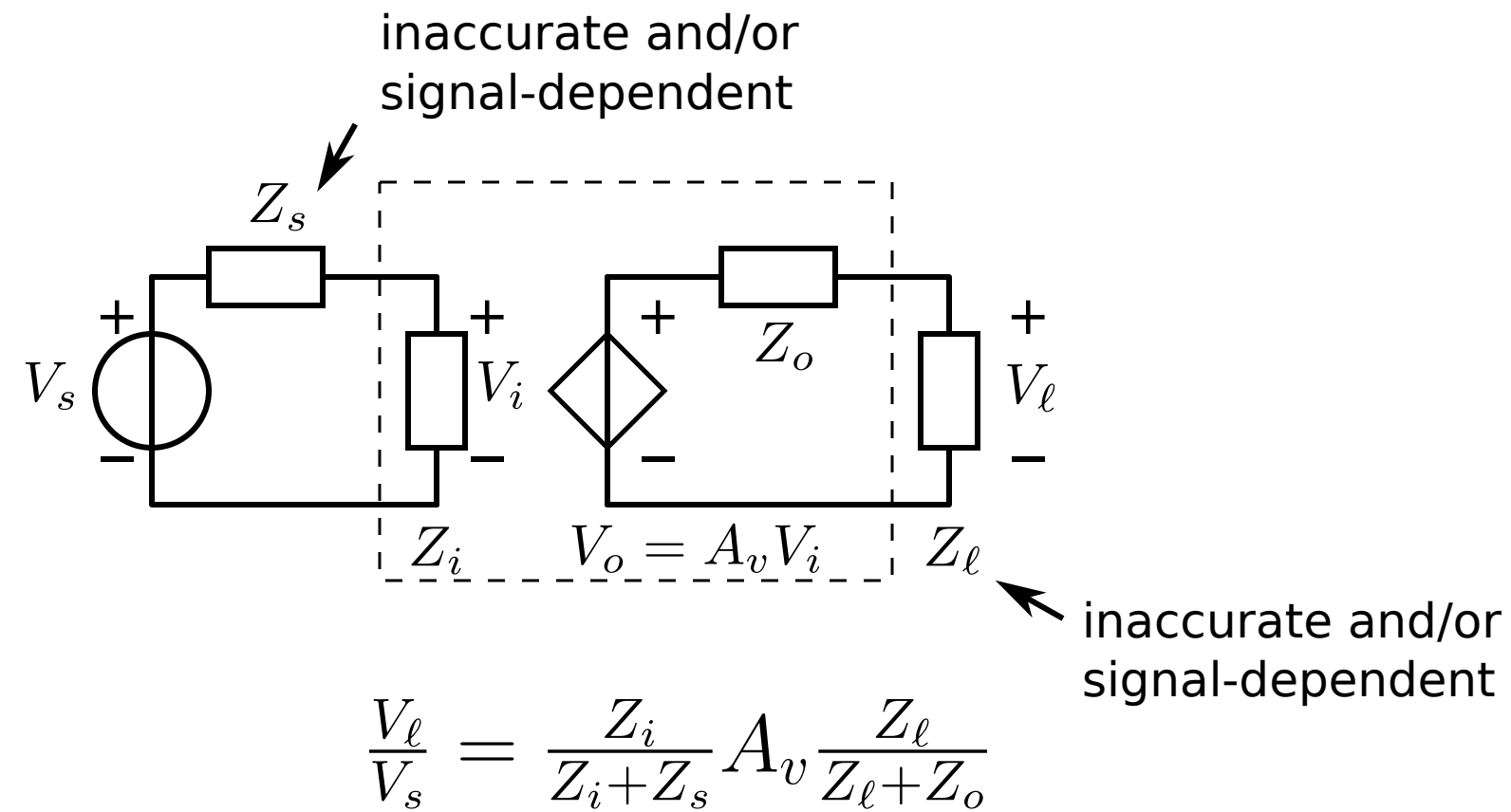
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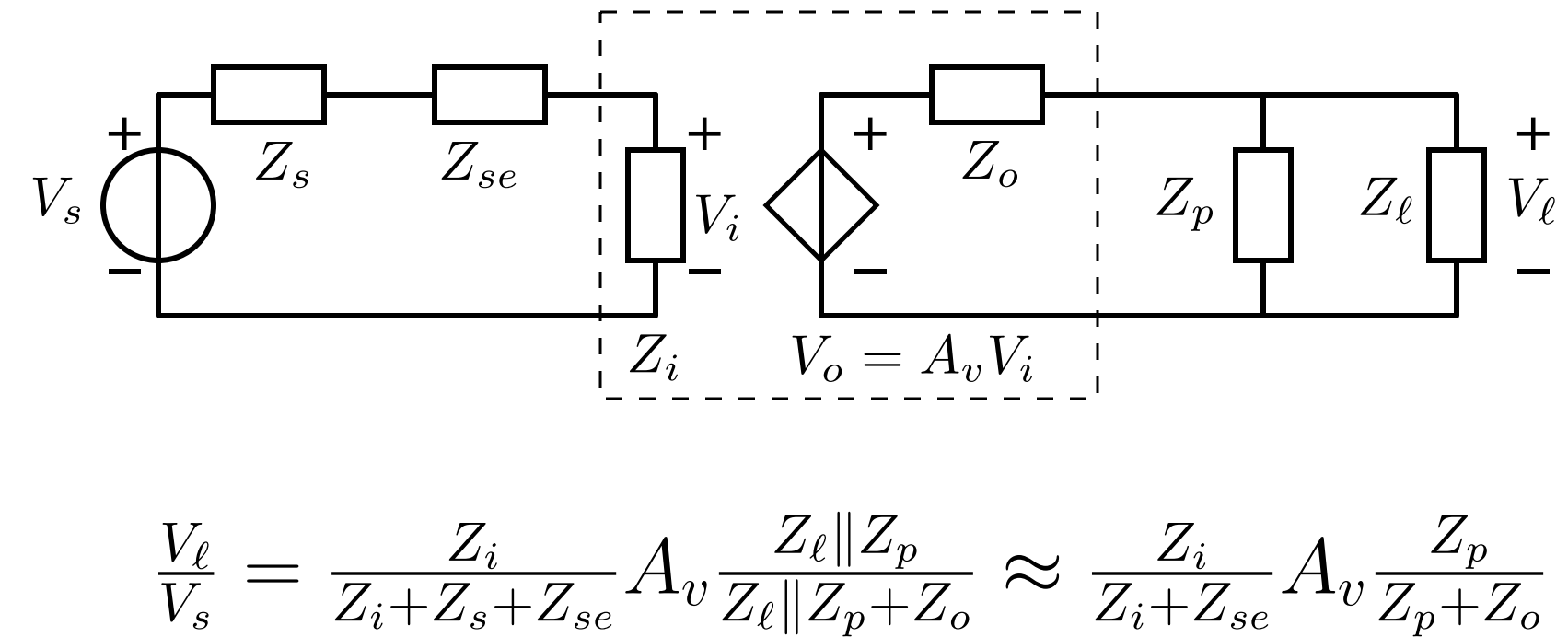
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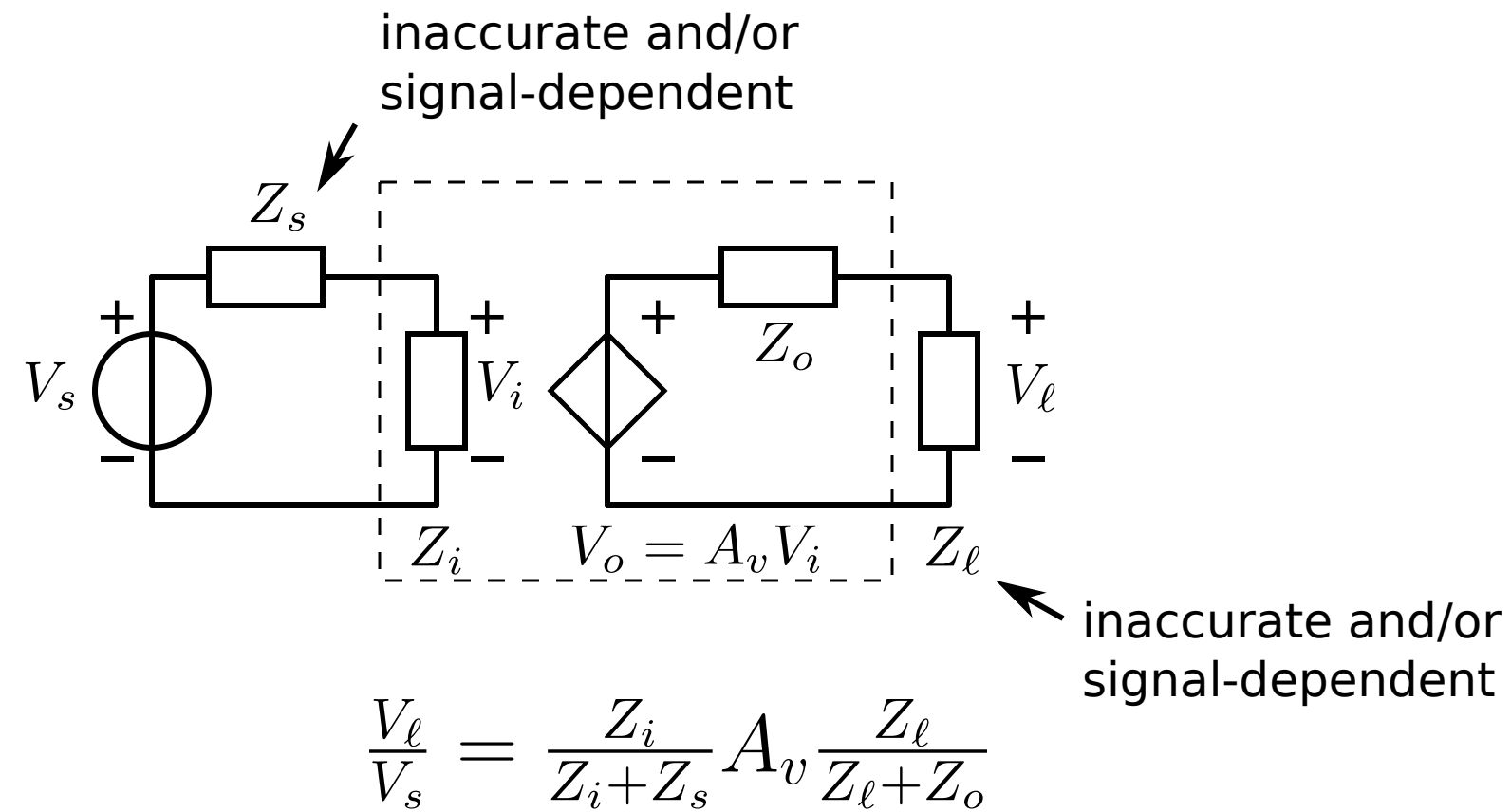
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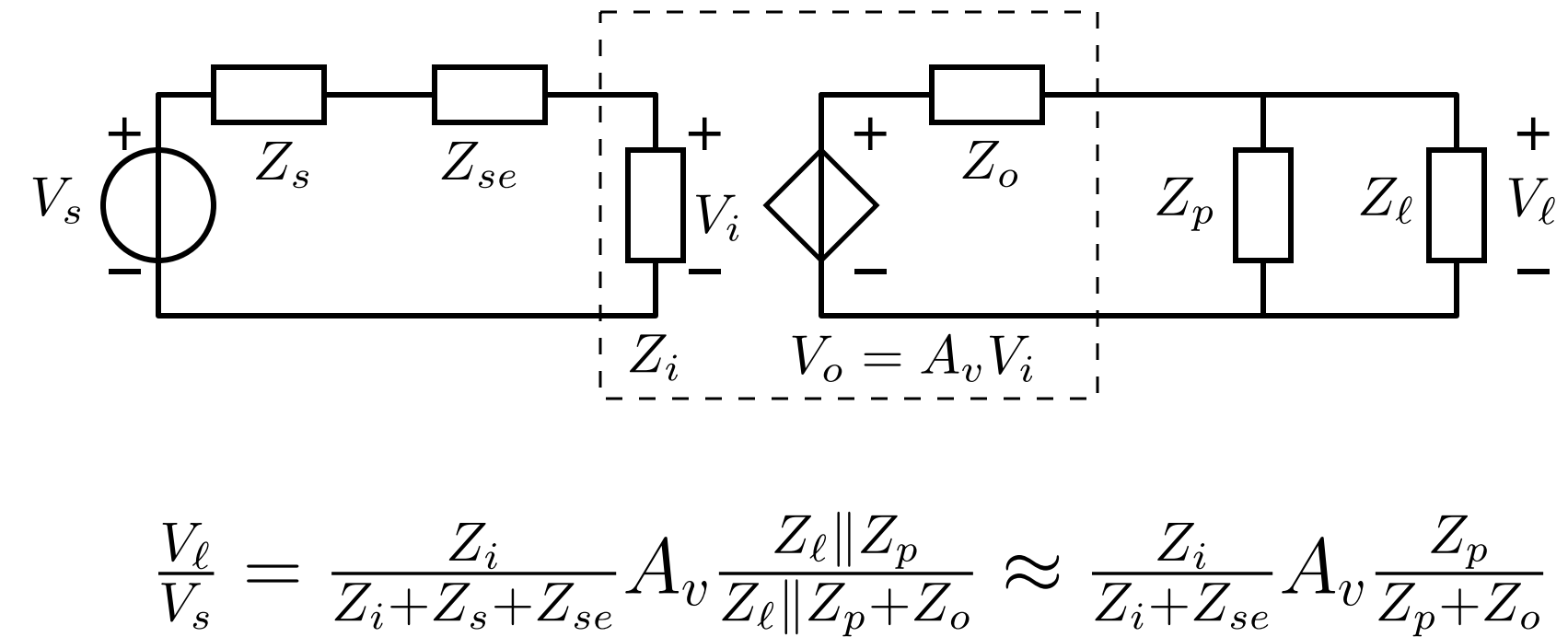


- ☹️ At the source:
reduction of the signal to noise ratio
- ☹️ At the load:
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- ☹️ Source-to-load transfer:
reduced as a result of attenuation

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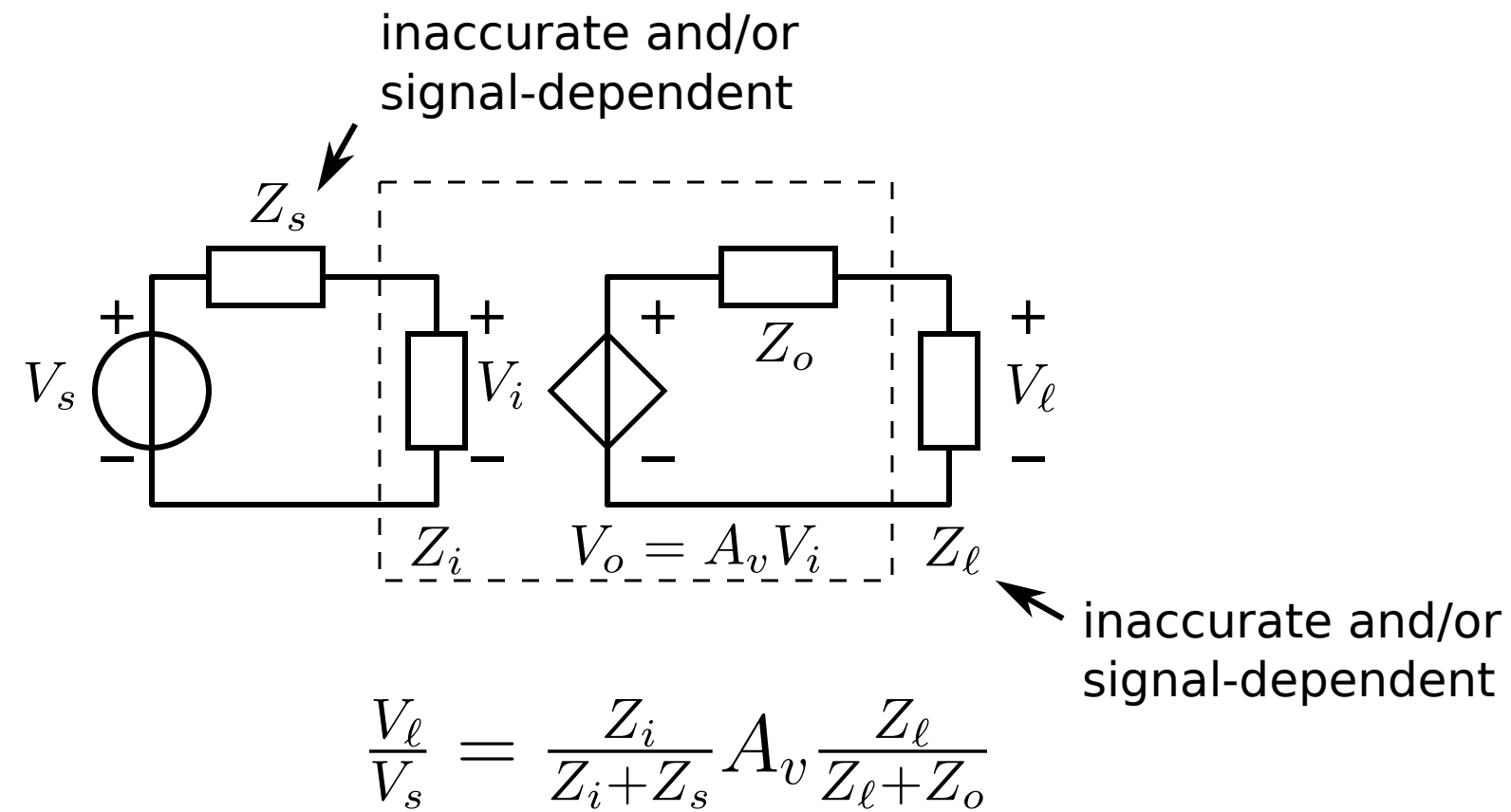
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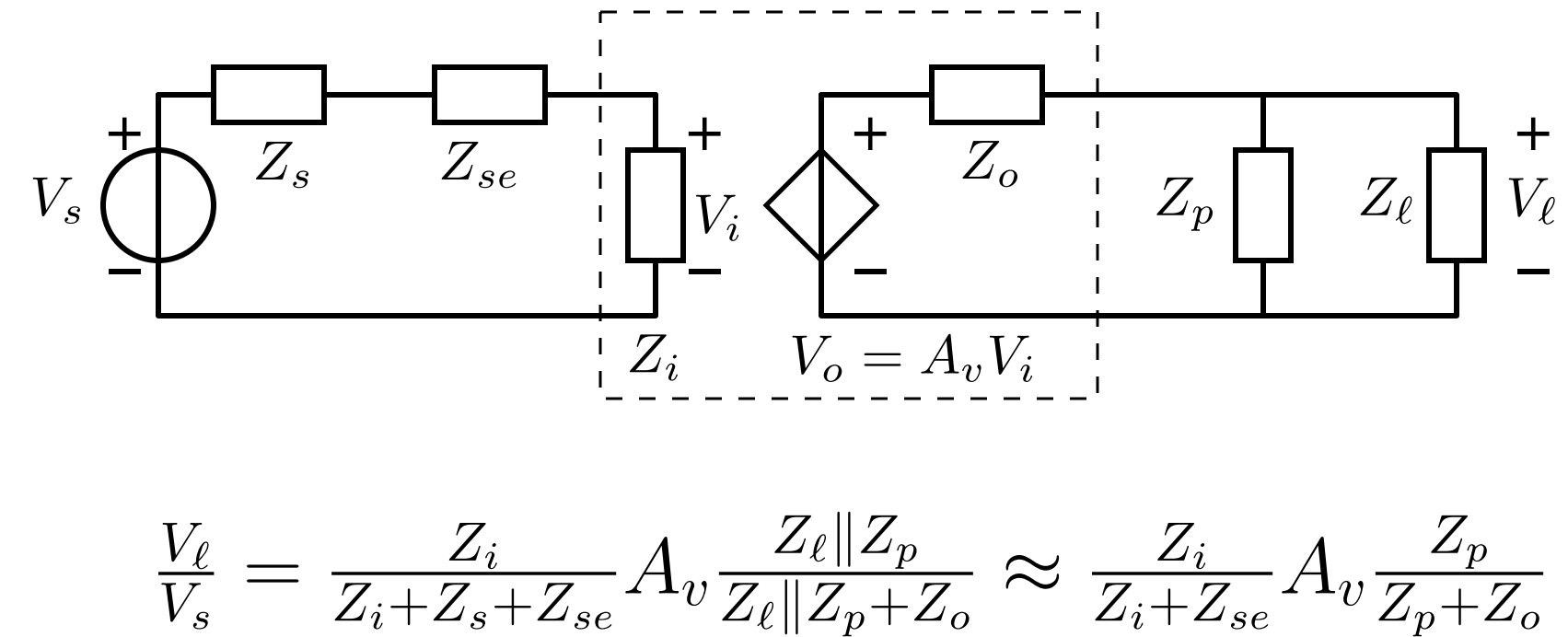
- accuracy and noise addition
- accuracy and power inefficiency
- accuracy and source-to-load transfer

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Orthogonality: See: "orthogonalDesignNegativeFeedbackAmplifiers.svg"

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