Computation Tree Logic

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- Syntax of CTL
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Motivation

Needing of uncertainty;

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Different paths of the future;

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Intuition

In Computation Tree Logic (CTL) the model of time is a tree-like structure. This way, we cannot use Linear Temporal Logic (LTL) to express the existence of a certain path of time in which some event occurs.

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Syntax

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$$\mathtt{AF}\phi \mid \mathtt{EF}\phi \mid \mathtt{AG}\phi \mid \mathtt{EG}\phi \mid \mathtt{A}[\phi \mathcal{U} \phi] \mid \mathtt{E}[\phi \mathcal{U} \phi]$$

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With p as a literal (atomic formula), `AX`, `EX`, `AF`, `EF`, `AG` e `EG` unary operators.

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