

-NoValue-

tab.1 Introduction

nml:tab:int:
sec **Tableaux** are certain (downward-branching) trees of *fórmulas assinadas*, O.s., pairs consisting of a truth value sign ($\mathbb{T}$ or $\mathbb{F}$) and a *sentença*

$$\mathbb{T}\varphi \text{ or } \mathbb{F}\varphi.$$

A **tableau** begins with a number of *assumptions*. Each further *fórmula assinada* is generated by applying one of the inference rules. Some inference rules add one or more *fórmulas assinadas* to a tip of the tree; others add two new tips, resulting in two branches. Rules result in *fórmulas assinadas* where the *fórmula* is less complex than that of the *fórmula assinada* to which it was applied. When a branch contains both $\mathbb{T}\varphi$ and $\mathbb{F}\varphi$, we say the branch is *closed*. If every branch in a **tableau** is closed, the entire **tableau** is closed. A closed **tableau** constitutes a *derivação* that shows that the set of *fórmulas assinadas* which were used to begin the **tableau** are unsatisfiable. This can be used to define a $\vdash$ relation: $\Gamma \vdash \varphi$ iff there is some finite set $\Gamma_0 = \{\psi_1, \dots, \psi_n\} \subseteq \Gamma$ such that there is a closed **tableau** for the assumptions

$$\{\mathbb{F}\varphi, \mathbb{T}\psi_1, \dots, \mathbb{T}\psi_n\}.$$

For modal logics, we have to both extend the notion of *fórmula assinada* and add rules that cover $\Box$ and $\Diamond$. In addition to a sign ($\mathbb{T}$ or $\mathbb{F}$), *fórmulas* in modal **tableaux** also have *prefixes* σ . The prefixes are non-empty sequences of positive integers, O.s., $\sigma \in (\mathbb{Z}^+)^* \setminus \{\Lambda\}$. When we write such prefixes without the surrounding $\langle \rangle$, and separate the individual *membros* by .’s instead of ,’s. If σ is a prefix, then $\sigma.n$ is $\sigma \frown \langle n \rangle$; p.ex., if $\sigma = 1.2.1$, then $\sigma.3$ is 1.2.1.3. So for instance,

$$1.2 \mathbb{T} \Box \varphi \rightarrow \varphi$$

is a *prefixed fórmula assinada* (or just a *prefixed fórmula* for short).

Intuitively, the prefix names a world in a model that might satisfy the *fórmulas* on a branch of a **tableau**, and if σ names some world, then $\sigma.n$ names a world accessible from (the world named by) σ .

Créditos das Imagens

Referências Bibliográficas