

\mathcal{ALC}

\mathcal{ALC}

$$\begin{array}{c|c}
 C, D & \rightarrow A \\
 \hline
 & \top \\
 & \perp \\
 & \neg C \\
 & C \sqcap D \\
 & C \sqcup D \\
 & \forall R.C \\
 & \exists R.C
 \end{array}$$

AR

$\mathcal{I}\Delta\Delta$

$$\begin{aligned}
 \mathcal{I}(\top) &= \Delta \\
 \mathcal{I}(\perp) &= \emptyset \\
 \mathcal{I}(\neg C) &= \Delta - \mathcal{I}(C) \\
 \mathcal{I}(C \sqcap D) &= \mathcal{I}(C) \cap \mathcal{I}(D) \\
 \mathcal{I}(C \sqcup D) &= \mathcal{I}(C) \cup \mathcal{I}(D) \\
 \mathcal{I}(\forall R.C) &= \{a \in \Delta \mid \forall b. [(a, b) \in \mathcal{I}(R) \Rightarrow b \in \mathcal{I}(C)]\} \\
 \mathcal{I}(\exists R.C) &= \{a \in \Delta \mid \exists b. [(a, b) \in \mathcal{I}(R) \wedge b \in \mathcal{I}(C)]\}
 \end{aligned}$$

$aCaC(a, b)RbRabR$

$\forall R.CRC\exists R.CRC$

$C \sqsubseteq DCDC \equiv DCDDCCDT$

$$\exists hasVerb.(Desenvolva \sqcap \exists hasTheme.X \sqcap \exists hasPurpose.Y) \equiv \exists hasVerb.Y$$



