

Dada una ER E , buscamos una ER E' tal que:

$$L(E') = \text{Ini}(L(E)) = \{ \alpha : \exists \beta \text{ t.q. } \alpha\beta \in L(E) \}$$

Definimos el método con inducción estructural sobre E .

Casos base

$$E = \emptyset \Rightarrow \text{Ini}(E) = \emptyset$$

$$E = \lambda \Rightarrow \text{Ini}(E) = \lambda$$

$$E = a \Rightarrow \text{Ini}(E) = a \mid \lambda$$

$$\text{Ini}(E) = \text{Ini}(L(E))$$

Casos inductivos

$$E = R.S \Rightarrow \text{Ini}(E) = \text{Ini}(R) \mid R.\text{Ini}(S)$$

$$E = R \mid S \Rightarrow \text{Ini}(E) = \text{Ini}(R) \mid \text{Ini}(S)$$

$$E = R^* \Rightarrow \text{Ini}(E) = R^*.\text{Ini}(R)$$

$$\begin{aligned} E = R^+ &\Rightarrow \text{Ini}(E) = \text{Ini}(R^+) = \text{Ini}(R.R^*) \\ &= \text{Ini}(R) \mid R.\text{Ini}(R^*) \\ &= \text{Ini}(R) \mid R.R^*.\text{Ini}(R) \\ &= \text{Ini}(R) \mid R^+.\text{Ini}(R) \end{aligned}$$