

**Definition** (Coproduct operator  $\oplus$ ). For  $h_1, h_2 : \mathbf{F} \rightarrow \mathcal{AR}$ , define

$$h_1 \oplus h_2 : \mathbf{F} \rightarrow \mathcal{AR},$$

$$f \mapsto \text{Min}_{\leq \mathbf{R}} (h_1(f) \cup h_2(f)).$$