

**Definition.** Given a DPI  $\langle \mathbf{F}, \mathbf{R}, \mathbf{I}, \text{prov}, \text{req} \rangle$ , define the map  $\varphi : \mathbf{R} \rightarrow_{\text{Pos}} \mathcal{AF}$  that associates to each resource  $r$  the set of maximal functionalities which can be realized with  $r$ :

$$\begin{aligned} \varphi : \mathbf{R} &\rightarrow_{\text{Pos}} \mathcal{AF}, \\ r &\mapsto \text{Max}_{\geq_{\mathbf{F}}} \{ \text{prov}(i) \mid (i \in \mathbf{I}) \wedge (r \geq \text{req}(i)) \}. \end{aligned}$$

If a certain resource  $r$  only leads to infeasible functionalities, then  $\varphi(r) = \emptyset$ .