

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

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

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