

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 $k(r) = \emptyset$.