

# Definition

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

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

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