

<i>RemoveNumber</i>
$\Delta TelephoneDirectory$
$p? : TELEPHONE$
$p? \in \text{ran } phoneNumbers$ $\exists m : \text{dom } persons \bullet$ $m \mapsto p? \in phoneNumbers \wedge$ $phoneNumbers' = phoneNumbers \setminus \{m \mapsto p?\}$

$OUTPUT ::= success \mid alreadyInDirectory \mid nameNotInDirectory \mid$
 $numberInUse \mid numberDoesntExist$

<i>Success</i>
$message! : OUTPUT$
$message! = success$

<i>AlreadyInDirectory</i>
$\Xi TelephoneDirectory$
$message! : OUTPUT$
$n? : NAME$
$s? : SURNAME$
$n? \mapsto s? \in persons$ $message! = alreadyInDirectory$

<i>NameNotInDirectory</i>
$\Xi TelephoneDirectory$
$message! : OUTPUT$
$n? : NAME$
$s? : SURNAME$
$n? \mapsto s? \notin persons$ $message! = nameNotInDirectory$

<i>NumberInUse</i>
$message! : OUTPUT$
$p? : TELEPHONE$
$p? \in \text{ran } phoneNumbers$ $message! = numberInUse$