

$$\begin{array}{ccccc}
 x & & I_\omega & \xrightarrow{\quad i \quad} & R \\
 \downarrow & & \downarrow (\pi)_\bullet & & \downarrow \varphi \\
 (\pi_n(x))_{n \in \omega} & & \coprod_{n \in \omega} \frac{I}{I_n} & \xrightarrow[\coprod \iota_n]{} & \coprod_{n \in \omega} E\left(\frac{I}{I_n}\right) \\
 & & & & \varphi(1_R) \cdot r
 \end{array}$$