$$U(s) \xrightarrow[p \text{ signaux}]{} \boxed{G(s)} \xrightarrow[r \text{ signaux}]{} Y(s)$$

$$u(t) \longrightarrow \boxed{\begin{aligned} \dot{x} &= Ax + Bu \\ y &= Cx + Du \end{aligned}} \longrightarrow y(t)$$

$$u = \begin{bmatrix} u_1 \\ u_2 \\ \vdots \\ u_p \end{bmatrix} \qquad y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_r \end{bmatrix}$$

	n	p
n	A $n \times n$	B $n \times p$
r	C $r \times n$	D $r \times p$

$$u \longrightarrow \boxed{S_1} \longrightarrow \boxed{S_1} \longrightarrow y$$

$$u \longrightarrow \boxed{S_1}, \boxed{S_2} \longrightarrow y$$