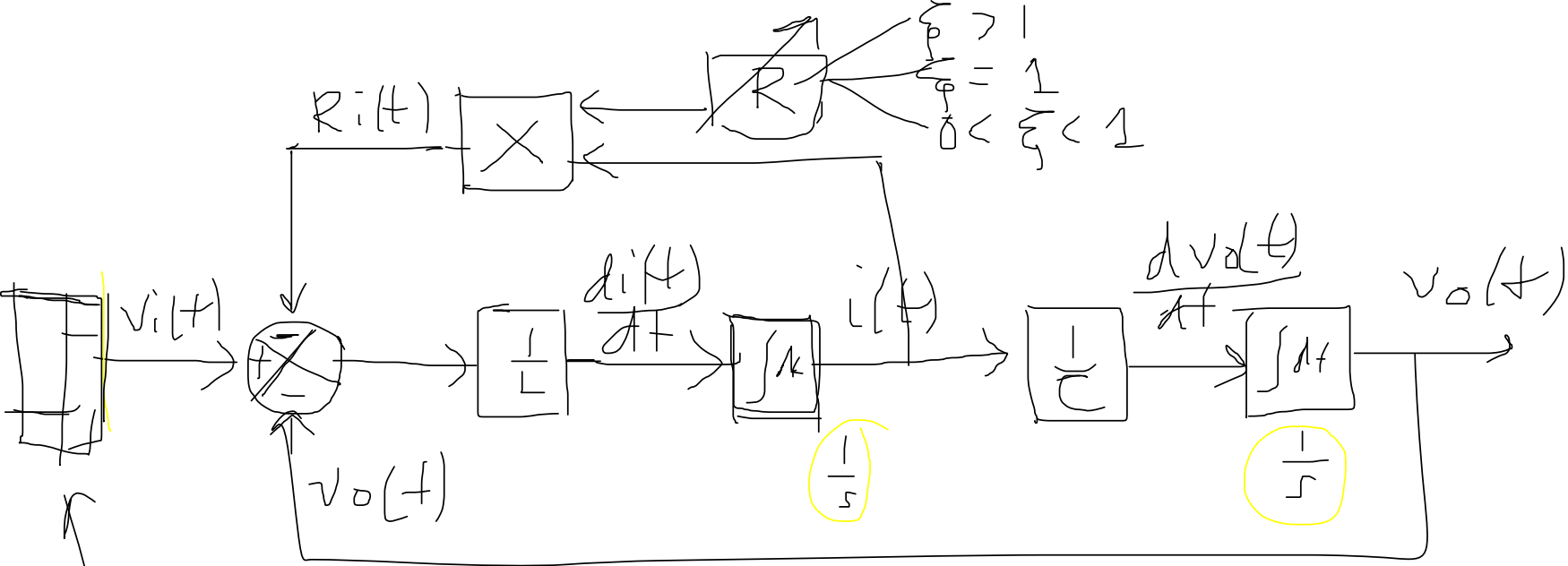
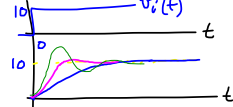
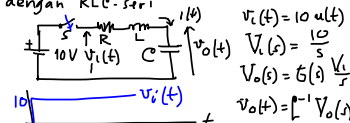




Isyarat untuk satu unit step

Project 1 Judul: VERIFIKASI SIMULINK Dikumpul: 29/09/14

Verifikasi menggunakan analisis transien dari rangkaian pemuatan kapasitor dengan RLC-seri



Mitra 1: D411111 ABC
Mitra 2: D411110 DEF

R diambil 3 (tiga) kasus.

- * Kasus 1 $R \Rightarrow \xi > 1$
- * Kasus 2 $R \Rightarrow \xi = 1$
- * Kasus 3 $R \Rightarrow 0 < \xi < 1$

Analisis menggunakan transf. Laplace.

- * Kasus 1 $v_o(t) = \mathcal{L}^{-1} \frac{K_1}{s(s+a)(s+b)} \Rightarrow \text{EXACT}$
- * Kasus 2 $v_o(t) = \mathcal{L}^{-1} \frac{K_2}{s(s+a)^2} \Rightarrow \text{EXACT}$
- * Kasus 3 $v_o(t) = \mathcal{L}^{-1} \frac{K_3}{s(s^2 + 2\xi\omega_n s + \omega_n^2)} \Rightarrow \text{EXACT}$

AKURASI perhitungan GALAT dan SIMULINK

Model Simulink

Hukum Ohm:

$$(1) v_i(t) - v_o(t) = Ri(t) + L \frac{di(t)}{dt}$$

$$\frac{di(t)}{dt} = \frac{1}{L} [v_i(t) - v_o(t) - Ri(t)]$$

$$(2) i(t) = C \frac{dv_o(t)}{dt}$$

$$\frac{dv_o(t)}{dt} = \frac{1}{C} i(t)$$

SOLUSI ANALITIK