Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Department of Computer Science
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Synthetic Biology

Assignment #03

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1.1 a

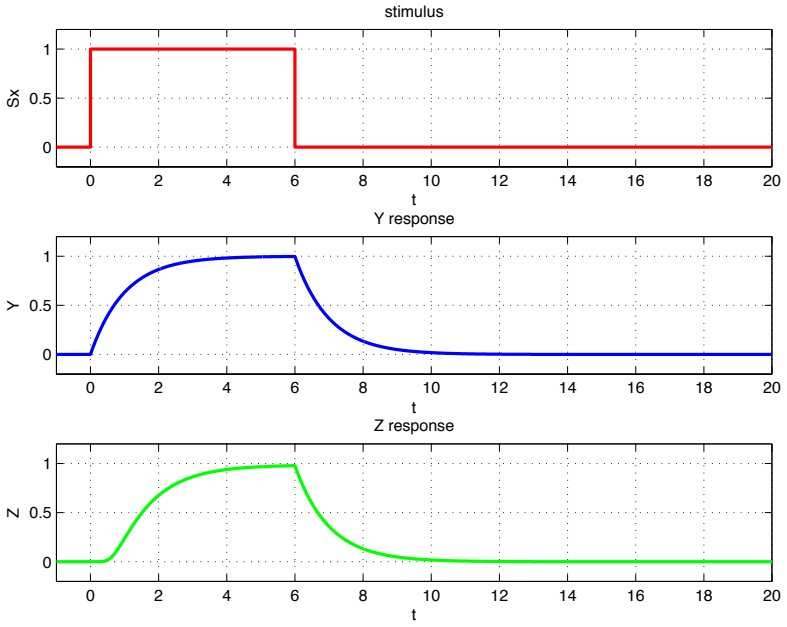

Figure 1.1: Graphs illustrating system responses to the stimulus

We report a delay in Z response after addition of the input signal S_X of 1.5200. After the removal of the signal the concentratin on Z decreasing immediately (no delay reported).

1.2 b

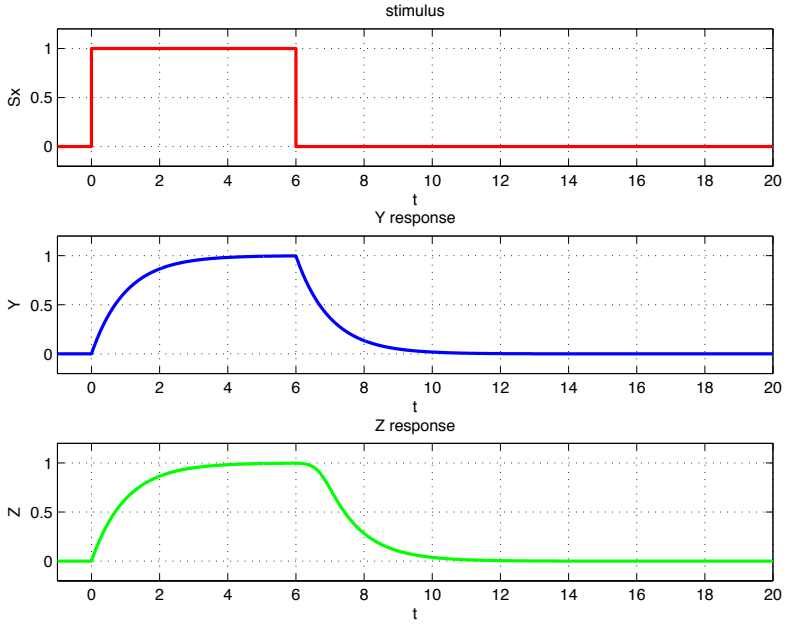

Figure 1.2: Graphs illustrating system responses to the stimulus with OR gate and $K_{YZ} = 0.1$

1.3 c

Condition	Begin	End	Time begin	Time end	Duration
STD	$x > 0$	$x = 0$	0.20	15.88	15.60

Table 1.1: Computation of the maximum duration of the signal (STD)

1.4 d

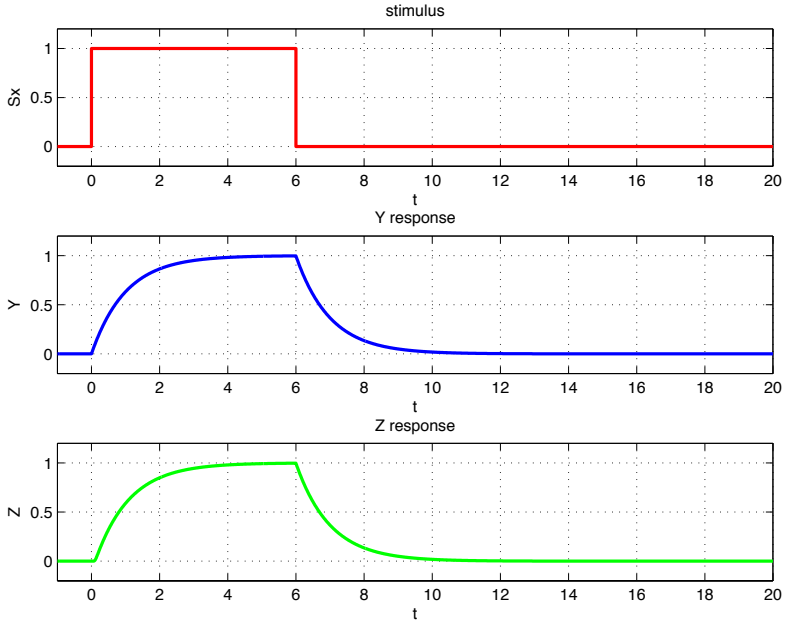

Figure 1.3: Graphs illustrating system responses to the stimulus with AND gate and $K_{YZ} = 0.1$

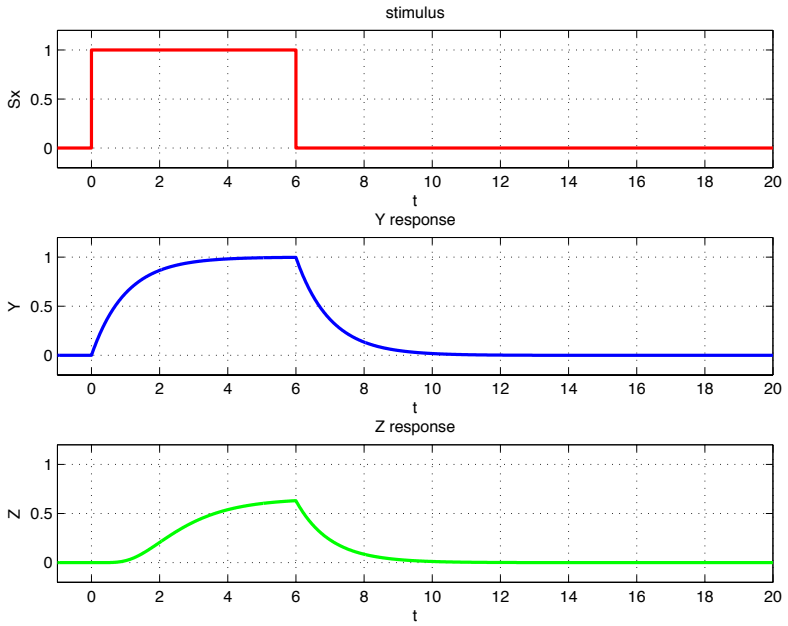

Figure 1.4: Graphs illustrating system responses to the stimulus with AND gate and $K_{YZ} = 0.9$

Condition	Begin	End	Time begin	Time end	Duration
$K_{YZ} = 0.1$	$x > 0$	$x = 0$	0.05	15.90	15.85
$K_{YZ} = 0.9$	$x > 0$	$x = 0$	0.34	15.44	15.10

Table 1.2: Computation of the maximum duration of the signal ($K_{YZ} = 0.1$ and $K_{YZ} = 0.9$)