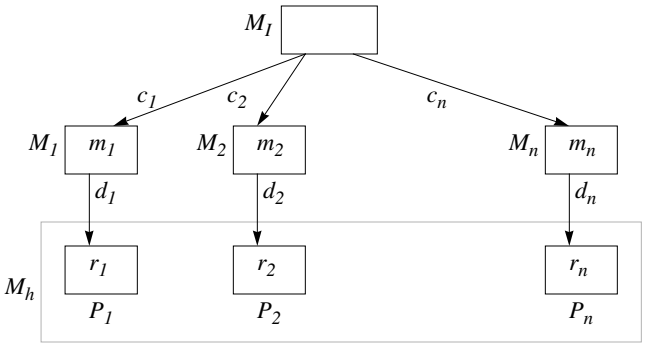



$M_k$: compute node $M_I$: machine running user interface
$M_h$: home machine $P_k$: rendering process on $M_h$

$c_k$: communication time of required message passing from $M_I$ to $M_k$

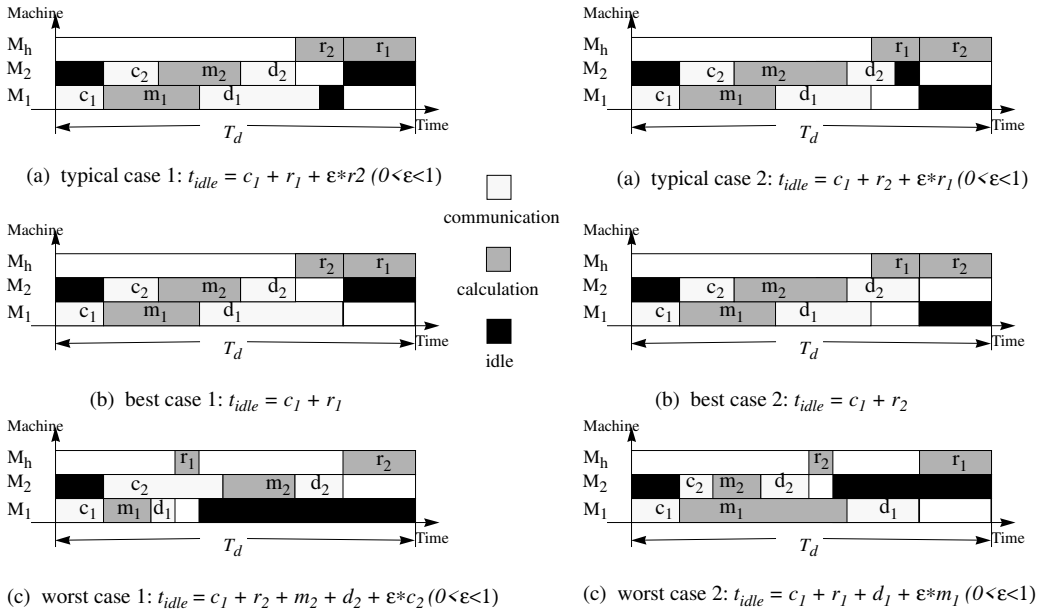
$d_k$: communication time of required message passing from $M_k$ to $M_h$

$m_k$: calculation time of performing required computation on $M_k$

$r_k$: calculation time of performing required rendering by $P_k$ on $M_h$

$(k = 1,2, \ldots n)$

Figure 2.1: A generalized performance model




(a) typical case 1: $t_{idle} = c_1 + r_1 + \varepsilon * r2$ $(0<\varepsilon<1)$

(a) typical case 2: $t_{idle} = c_1 + r_2 + \varepsilon * r_1$ $(0<\varepsilon<1)$

(b) best case 1: $t_{idle} = c_1 + r_1$

(b) best case 2: $t_{idle} = c_1 + r_2$

(c) worst case 1: $t_{idle} = c_1 + r_2 + m_2 + d_2 + \varepsilon * c_2$ $(0<\varepsilon<1)$

(c) worst case 2: $t_{idle} = c_1 + r_1 + d_1 + \varepsilon * m_1$ $(0<\varepsilon<1)$

Figure 2.2: Different cases of pipelined calculations and communications