PDM Scheduling

The real PDM algorithm!

$E_\alpha \leftarrow$ Project start date

Order $\{a_j\}$ so that $a_i \preccurlyeq a_k \ \forall \ i < k$

For $j=1$ to $|\{a_j\}|$ repeat:

$$ES_j \leftarrow \begin{cases} E_\alpha \text{ if } \Gamma_j^{-1} = \emptyset \\ \max_{k \in \Gamma_j^{-1}} \{ \text{\textbullet} \} \text{ otherwise} \end{cases}$$

$$\begin{cases} ES_k + DUR_k + LAG_{kj} \text{ if } \sigma_{kj} = \text{"FS"} \\ ES_k + LAG_{kj} \text{ if } \sigma_{kj} = \text{"SS"} \\ ES_k - DUR_j + LAG_{kj} \text{ if } \sigma_{kj} = \text{"SF"} \\ ES_k + DUR_k - DUR_j + LAG_{kj} \text{ if } \sigma_{kj} = \text{"FF"} \end{cases}$$

$L_\omega \leftarrow E_\omega$

For $j = |\{a_j\}|$ to 1 repeat:

$$LF_j \leftarrow \begin{cases} L_\omega \text{ if } \Gamma_j = \emptyset \\ \min_{k \in \Gamma_j} \{ \text{\textbullet} \} \text{ otherwise} \end{cases}$$

$$\begin{cases} LF_k - DUR_k - LAG_{kj} \text{ if } \sigma_{jk} = \text{"FS"} \\ LF_k - DUR_k + DUR_j - LAG_{kj} \text{ if } \sigma_{jk} = \text{"SS"} \\ LF_k + DUR_j - LAG_{kj} \text{ if } \sigma_{jk} = \text{"SF"} \\ LF_k - LAG_{kj} \text{ if } \sigma_{jk} = \text{"FF"} \end{cases}$$

$TF_j \leftarrow LF_j - EF_j$

$FF_j \leftarrow \min_{k \in \Gamma_j} \{ ES_k \} - EF_j$