An Application of Dataflow

• 1. Fieldbus blocks are a form of SDF
  – 1.1 Composed of actors (stars) that produce and consume data tokens
  – 1.2 Statically scheduled

• 2. Blocks are usually considered atomic entities

• 3. Not any more.
Fieldbus Configuration System

Apply Values
source (DM)
Periodic Updates: 2 (sec)
OCS: Auto

Expression:
\[ \text{d_out}_1 = \text{ld_out}_1; \]
\[ \text{if} (\text{d_out}_1) \text{d_out}_2 = \text{ld_out}_2; \]
\[ \text{if} (\text{d_out}_2) \text{d_out}_3 = \text{ld_out}_3; \]
\[ \text{if} (\text{d_out}_3) \text{d_out}_4 = \text{ld_out}_4; \]

sink (DM)
Periodic Updates: 2 (sec)
OCS: Auto

Expression:
\[ a_{\text{out}}_0 = a_{\text{in}}_0 + a_{\text{in}}_1 + a_{\text{in}}_2 + a_{\text{in}}_3. \]