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1 example1 Theory

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Parent Theories: acIDrules

1.1 Datatypes

commands = go | nogo | launch | abort

staff = Alice | Bob | Carol | Dan

1.2 Theorems

[example1Theorem]

$\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Alice controls prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat prop go}$

[example1TheoremA]

$\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Alice controls prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat prop go}$

[example1TheoremB]

$\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Alice controls prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat prop go}$

[example2Theorem]

$\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Alice speaks_for Name Bob} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Bob controls prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat prop go}$

[example2TheoremA]

$\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Alice speaks_for Name Bob} \Rightarrow$
 $(M, Oi, Os) \text{ sat Name Bob controls prop go} \Rightarrow$
 $(M, Oi, Os) \text{ sat prop go}$

`[example2TheoremB]`

$$\begin{aligned}
&\vdash (M, Oi, Os) \text{ sat Name Alice says prop go} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat Name Alice speaks_for Name Bob} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat Name Bob controls prop go} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat prop go}
\end{aligned}$$
`[example3Theorem]`

$$\begin{aligned}
&\vdash (M, Oi, Os) \text{ sat prop go impf prop launch} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat prop go} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat Name Carol says prop launch}
\end{aligned}$$
`[example3TheoremA]`

$$\begin{aligned}
&\vdash (M, Oi, Os) \text{ sat prop go impf prop launch} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat prop go} \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat Name Carol says prop launch}
\end{aligned}$$
`[Mono_Reps_Theorem]`

$$\begin{aligned}
&\vdash (M, Oi, Os) \text{ sat } Q \text{ controls } f \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat reps } P \ Q \ f \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat } P' \text{ quoting } Q' \text{ says } f \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat } P' \text{ speaks_for } P \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat } Q' \text{ speaks_for } Q \Rightarrow \\
&\quad (M, Oi, Os) \text{ sat } f
\end{aligned}$$

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