MODULE *WorkflowDefinitionPretty*

EXTENDS *WorkflowDefinition*

GIVEN the set of FA tasks:

CONSTANT *Tasks*

```
e.g. Tasks ==
{   [ name |-> "EVI", repeatable |-> FALSE, group |-> "non-destructive" ]
,   [ name |-> "IVI", repeatable |-> FALSE, group |-> "non-destructive" ]
}
```

such that it adheres to the expected structure

ASSUME $IsFiniteSet(Tasks)$
ASSUME $\forall\, task \in Tasks : (\forall\, id \in DOM(task) : id \in \{\text{“name”}, \text{“repeatable”}, \text{“group”}\})$
ASSUME $\forall\, task \in Tasks : task.name \in \text{STRING}$
ASSUME $\forall\, task,\, otherTask \in Tasks : task.name = otherTask.name \Rightarrow task = otherTask$
ASSUME $\forall\, task \in Tasks : task.repeatable \in \text{BOOLEAN}$
ASSUME $\forall\, task \in Tasks : task.group \in \{\text{“destructive”}, \text{“non-destructive”}, \text{“both”}\}$

GIVEN the set of connections between FA tasks:

CONSTANT *Connections*

```
e.g. Connections ==
{   [ name |-> "has_successor", srcName |-> "EVI", dstName |-> "IVI" ]
}
```

such that it adheres to the expected structure

ASSUME $IsFiniteSet(Connections)$
ASSUME $\forall\, conn \in Connections :$
$\quad \forall\, id \in DOM(conn) : id \in \{\text{“name”}, \text{“srcName”}, \text{“dstName”}\}$
ASSUME $\forall\, conn \in Connections : conn.name \in$
$\quad \{$ “has_successor”
$\quad ,$ “has_predecessor”
$\quad ,$ “has_mandatory_predecessor”
$\quad ,$ “has_mandatory_successor”
$\quad \}$
ASSUME $\forall\, conn \in Connections : \exists\, task \in Tasks : task.name = conn.srcName$
ASSUME $\forall\, conn \in Connections : \exists\, task \in Tasks : task.name = conn.dstName$
ASSUME $\forall\, conn \in Connections : conn.srcName \neq conn.dstName$

WHEN checking for errors in an input workflow

CONSTANT *Workflow*

```
e.g. Workflow == << "EVI", "IVI" >>
```

such that it adheres to the expected structure

ASSUME $DOM(Workflow) = 1 \,..\, Len(Workflow)$ a proper tuple
ASSUME $\forall\, t \in RAN(Workflow) : t \in$ STRING