Time Accelerator

```
domain = "Signal";
displayName = "TimeAccelerator";
brief = "Accelerate time in mission simulation";
componentType = "ComponentSignal";
author = "Petter Krus <petter.krus@liu.se>";
affiliation = "Division of Fluid and Mechatronic Systems, Linköping University";
SetFilenames[defaultPath, domain, displayName];
ResetComponentVariables[];
```

```
Transformi = 1;
```

```
outputVariables = {
    {timeE, 0., double, "sec", "effective time"},
    {massflowE, 0., double, "kg", "Effective Mass flow rate"},
    {xcgE, 0., double, "m", "Effective x-position"},
    {ycgE, 0., double, "m", "Effective y-position"}
  };
```

```
inputVariables = {
    {timecomp, 1., double, "", "time compression rate"},
    {massflow, 0., double, "kg/s", "Mass flow rate"},
    {vxcg, 0., double, "m", "x-position"},
    {vycg, 0., double, "m", "y-position"}
  };
```

```
systemVariables = {xcgE, ycgE, timeE};
```

```
systemEquationsDa = {
    Der[xcgE] - timecomp * vxcg,
    Der[ycgE] - timecomp * vycg,
    Der[timeE] - timecomp
  };
```

```
boudaryEquations = {};
```

```
expressions = {
        {massflowE, timecomp massflow}
        };
```

```
variableLimits = {
    {consfuel, 0, massfuel0}
  };
```

```
variableLimits = {};
```

```
Compgen [file]
```