

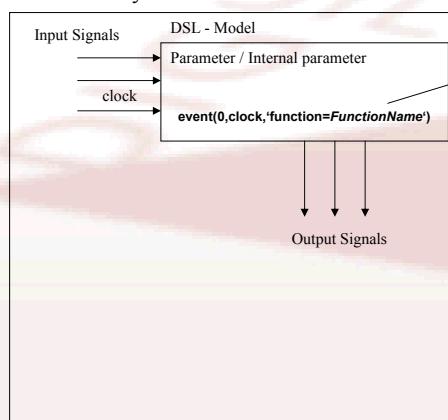


Link to an external event driven C/C++ function

Fixed Date2/2/2006

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PowerFactory



digxdyn.dll

`FunctionName(tEvent,output,parameter, ...)`
`FunctionName2(tEvent,output,parameter, ...)`
`FunctionName3(tEvent,output,parameter, ...)`
`FunctionName4(tEvent,output,parameter, ...)`

- Parameter/internal parameter can be set
- receives interpolated output signals
- Userdefined message to the PowerFactory output window
- Definition of PowerFactory events

Fixed Date2/2/2006

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C / C++ Interface

```

void __cdecl function( double tEvent, double** dParams, const double** dOuts,
                      const double** dIntSigs, char** eventstr, char* msg,
                      int nParams, int nOuts, int nIntSigs)

    double tEvent          : event calling time in seconds (simulation time)
    double** dParams       : parameter array (includes parameter and internal
                           parameter, sorted by name)
    const double** dOuts   : output signal array (interpolated values), values
                           cannot be modified
    const double** dIntSigs : not used (NULL), used for future extensions
    char** eventstr        : char*[5] max. five event strings can be define
                           e.g. "create=EvtParam name=Test Target=this ...."
                           max. event string length char[100]
    char* msg              : event message string for output a PCL message in
                           the PowerFactory output window
    int nParams            : no of parameters
    int nOuts              : no of outputs
    int nIntSigs           : not used, used for future extensions ...
  
```

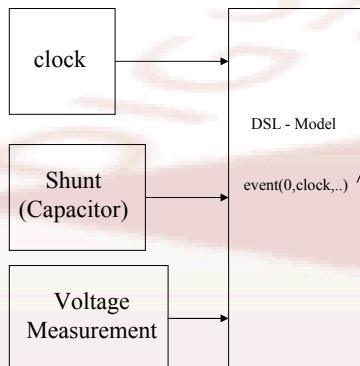
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Example

PowerFactory



digexdyn.dll (C/C++ code)

```

void __cdecl StepCapacitor(double tEvent,double** dParams, .....)

    newstep = oldstep;
    if (voltage < 0.8) {
        newstep = newstep + 1;
    }

    // step capacitor
    if (newstep != oldstep) {
        // create a PowerFactory parameter event to set
        // the actual step of the capacitor at delta time = Tdelay
        sprintf(eventstr[0],"create=EvtParam target=Shunt
                           name=CapStep dtimes=t
                           variable=ncapa value=%d",Tdelay,newSteps);
        // print a message into the output window
        sprintf(msg,"Capacitor changed to step=%d", newSteps);
    }
  
```

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