

ISSUE:

In Section 10 of the 2004-Sep-22 Editor's Draft, we define functions to ascertaining date/time relative to the endpoint's clock, to enforce the concept of a Duration – or Relative – timeout. Most notable is the function:

`xsd:boolean hasTimeElapsed(xsd:duration elapsedTime, xsd:QName roleName)`

which returns "true" if used in a guard or repetition condition of a Work Unit with the block attribute set to "true" and the time specified by `elapsedTime` at the Role specified by `roleName` has elapsed from the time the either the guard or the repetition condition were enabled for matching (otherwise it returns "false").

At this time there is no comparable function for enforcing the concept of a Deadline – or Absolute – timeout. The justification behind this is that the one can use comparisons of the results from `xsd:date getCurrentDate(xsd:QName roleName)` or `xsd:date getCurrentDateTime(xsd:QName roleName)` to achieve this functionality. This is of interest since, given the use cases in which timeouts are generally encountered, it may be desired to specify alternate exception/fault paths to be taken within a Choreography, which are managed in CDL via the Work Unit construct. As such one may be required to evaluate Deadline timeouts only when used in a guard or repetition condition of a Work Unit with the block attribute set to "true".

PROPOSAL:

Add the following to the WS-CDL supplied functions:

`xsd:boolean hasDeadlineElapsed(xsd:dateTime elapsedTime, xsd:QName roleName)`

which returns "true" if used in a guard or repetition condition of a Work Unit with the block attribute set to "true" and the time specified by `deadlineTime` at the Role specified by `roleName` has elapsed given that either the guard or the repetition condition were enabled for matching.

In light of this, it would be useful to give the Duration timeout function a name which more clearly represents its semantics:

`xsd:boolean hasDurationElapsed(xsd:duration elapsedTime, xsd:QName roleName)`