# Description logic view: BFO-Occurrents

## Classes

${f Connected S}$	patiotemi	poralRegion
Commedicas	patiotern	porantegion

$\label{eq:connectedSpatiotemporalRegion} $$                                  $
${f Connected Temporal Region}$
Connected Temporal Region $\equiv$ Temporal Instant $\sqcup$ Temporal Interval Connected Temporal Region $\sqsubseteq$ Temporal Region Connected Temporal Region $\sqsubseteq$ ¬ Scattered Temporal Region
Entity
FiatProcessPart
FiatProcessPart  ☐ ProcessualEntity  FiatProcessPart  ☐ ¬ ProcessualContext  FiatProcessPart  ☐ ¬ Process  FiatProcessPart  ☐ ¬ ProcessAggregate  FiatProcessPart  ☐ ¬ ProcessBoundary
Occurrent
Occurrent $\equiv$ ProcessualEntity $\sqcup$ SpatiotemporalRegion $\sqcup$ TemporalRegion Occurrent $\sqsubseteq$ Entity
Process
Process  ☐ ProcessualEntity  Process ☐ ¬ ProcessAggregate  Process ☐ ¬ FiatProcessPart  Process ☐ ¬ ProcessBoundary  Process ☐ ¬ ProcessualContext
${f Process Aggregate}$
ProcessAggregate  □ ProcessualEntity  ProcessAggregate □ ¬ Process  ProcessAggregate □ ¬ ProcessBoundary  ProcessAggregate □ ¬ ProcessualContext  ProcessAggregate □ ¬ FigtProcessPart

F	ProcessBoundary
P P P	ProcessBoundary  ☐ ProcessUndary ☐ ProcessAggregate ProcessBoundary ☐ Process ProcessBoundary ☐ Process ProcessBoundary ☐ ProcessPart ProcessPart ☐ ProcessPart
	$ProcessBoundary \sqsubseteq \neg ProcessualContext$
F	ProcessualContext
P P P	ProcessualContext $\sqsubseteq$ ProcessualEntity ProcessualContext $\sqsubseteq \neg$ FiatProcessPart ProcessualContext $\sqsubseteq \neg$ ProcessAggregate ProcessualContext $\sqsubseteq \neg$ Process ProcessualContext $\sqsubseteq \neg$ ProcessBoundary
F	ProcessualEntity
P P	ProcessualEntity $\equiv$ FiatProcessPart $\sqcup$ Process $\sqcup$ ProcessAggregate $\sqcup$ ProcessBoundary $\sqcup$ ProcessualContextProcessualEntity $\sqsubseteq$ OccurrentProcessualEntity $\sqsubseteq$ $\neg$ TemporalRegionProcessualEntity $\sqsubseteq$ $\neg$ SpatiotemporalRegion
S	${f Scattered Spatiotemporal Region}$
	cattered Spatiotemporal Region $\sqsubseteq$ Spatiotemporal Region $\sqsubseteq$ Connected Spatiotemporal Region
$\mathbf{S}$	${f Scattered Temporal Region}$
	cattered Temporal Region $\sqsubseteq$ Temporal Region cattered Temporal 
S	SpatiotemporalInstant
	patiotemporal Instant $\sqsubseteq$ Connected Spatiotemporal Region patiotemporal Instant $\sqsubseteq \neg$ Spatiotemporal Interval
$\mathbf{S}$	SpatiotemporalInterval
	patiotemporal Interval $\sqsubseteq$ Connected Spatiotemporal Region patiotemporal Interval $\sqsubseteq \neg$ Spatiotemporal Instant
S	SpatiotemporalRegion
S S	$\begin{array}{l} patiotemporal Region \equiv Connected Spatiotemporal Region \sqcup Scattered Spatiotemporal Region \\ patiotemporal Region \sqsubseteq Occurrent \\ patiotemporal Region \sqsubseteq \neg Processual Entity \\ patiotemporal Region \sqsubseteq \neg Temporal Region \\ \end{array}$

#### ${\bf Temporal Instant}$

$$\label{eq:connectedTemporalRegion} \begin{split} \operatorname{TemporalInstant} &\sqsubseteq \operatorname{ConnectedTemporalRegion} \\ \operatorname{TemporalInstant} &\sqsubseteq \neg \operatorname{TemporalInterval} \end{split}$$

#### **TemporalInterval**

$$\label{eq:connectedTemporalRegion} \begin{split} \text{TemporalInterval} &\sqsubseteq \text{ConnectedTemporalRegion} \\ \text{TemporalInterval} &\sqsubseteq \neg \text{TemporalInstant} \end{split}$$

### ${\bf Temporal Region}$

$$\label{eq:connectedTemporalRegion} \begin{split} \operatorname{TemporalRegion} & \sqsubseteq \operatorname{ConnectedTemporalRegion} \sqcup \operatorname{ScatteredTemporalRegion} \\ \operatorname{TemporalRegion} & \sqsubseteq \operatorname{Occurrent} \\ \operatorname{TemporalRegion} & \sqsubseteq \operatorname{\neg} \operatorname{SpatiotemporalRegion} \\ \end{split}$$

## Object properties

Data properties

**Individuals** 

**Datatypes** 

string