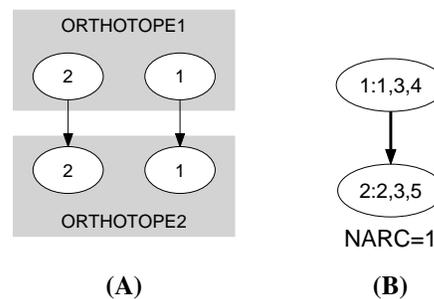


5.411 two_orth_include

	DESCRIPTION	LINKS	GRAPH
Origin	Used for defining <code>diffn_include</code> .		
Constraint	<code>two_orth_include(ORTHOTOPE1, ORTHOTOPE2, DIM)</code>		
Type	ORTHOTOPE : <code>collection(ori-dvar, siz-dvar, end-dvar)</code>		
Arguments	ORTHOTOPE1 : ORTHOTOPE ORTHOTOPE2 : ORTHOTOPE DIM : <code>int</code>		
Restrictions	$ ORTHOTOPE > 0$ <code>require_at_least(2, ORTHOTOPE, [ori, siz, end])</code> $ORTHOTOPE.siz \geq 0$ $ORTHOTOPE.ori \leq ORTHOTOPE.end$ $ ORTHOTOPE1 = ORTHOTOPE2 $ <code>orth_link_ori_siz_end(ORTHOTOPE1)</code> <code>orth_link_ori_siz_end(ORTHOTOPE2)</code> $DIM > 0$ $DIM \leq ORTHOTOPE1 $		
Purpose	Let P_1 and P_2 respectively denote the projections of ORTHOTOPE1 and ORTHOTOPE2 onto dimension DIM. If P_1 and P_2 overlap then, either P_1 is included in P_2 , either P_2 is included in P_1 .		
Example	$\left(\begin{array}{l} \langle ori - 1 \text{ siz} - 3 \text{ end} - 4, ori - 1 \text{ siz} - 1 \text{ end} - 2 \rangle, \\ \langle ori - 1 \text{ siz} - 2 \text{ end} - 3, ori - 2 \text{ siz} - 3 \text{ end} - 5 \rangle, 1 \end{array} \right)$		

Figure 5.781: Initial and final graph of the `two_orth_include` constraint

Typical`|ORTHOTOPE| > 1`**Symmetry**Arguments are [permutable](#) w.r.t. permutation (ORTHOTOPE1, ORTHOTOPE2) (DIM).**Used in**[diffn_include](#).**See also****implied by:** [two_orth_column](#).**related:** [diffn](#) (*an extension of the [diffn](#) constraint*).**Keywords****constraint type:** [logic](#).**geometry:** [geometrical constraint](#), [positioning constraint](#), [orthotope](#).

Arc input(s)	ORTHOTOPE1 ORTHOTOPE2
Arc generator	<i>PRODUCT</i> (=) \mapsto <i>collection</i> (orthotope1, orthotope2)
Arc arity	2
Arc constraint(s)	$\wedge \left(\begin{array}{l} \text{orthotope1.key} = \text{DIM}, \\ \text{orthotope1.ori} < \text{orthotope2.end}, \\ \text{orthotope2.ori} < \text{orthotope1.end}, \\ \text{orthotope1.siz} > 0, \\ \text{orthotope2.siz} > 0 \end{array} \right) \Rightarrow$ $\begin{array}{l} \min(\text{orthotope1.end}, \text{orthotope2.end}) - \\ \max(\text{orthotope1.ori}, \text{orthotope2.ori}) \\ \min(\text{orthotope1.siz}, \text{orthotope2.siz}) \end{array} =$
Graph property(ies)	<i>NARC</i> = 1

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