

1 Experiment jd-rca2.txt

```
type rca_ontology ;;

operators E F FE;;

ontology_1
  o1:person
  o1:house
;;

ontology_2
  o2:inhabitant
  o2:place
;;

instances
  o1:person o1:p1
  o1:person o1:p2
  o1:person o1:p3

  o2:inhabitant o2:i1
  o2:inhabitant o2:i2
  o2:inhabitant o2:i3

  o1:house   o1:h1
  o1:house   o1:h2
  o1:house   o1:h3

  o2:place   o2:a1
  o2:place   o2:a2
  o2:place   o2:a3
;;

properties

  val o1:p1 o1:lastname Dupont
  val o1:p2 o1:lastname Dubois
  val o1:p3 o1:lastname Dubois

  obj o1:p1 o1:home   o1:h1
  obj o1:p2 o1:home   o1:h2
  obj o1:p3 o1:home   o1:h3

  val o1:h1 o1:city   Grenoble
  val o1:h2 o1:city   Paris
  val o1:h3 o1:city   Paris

  obj o1:h1 o1:owner o1:p2
  obj o1:h2   o1:owner o1:p3
  obj o1:h3   o1:owner o1:p1

  val o2:i1 o2:name   Dupont
  val o2:i2 o2:name   Dubois
  val o2:i3 o2:name   Dubois
  val o2:i1 o2:given  Thomas
  val o2:i2 o2:given  Thomas
  val o2:i3 o2:given  Lisa

  obj o2:i1 o2:address o2:a1
  obj o2:i2 o2:address o2:a2
  obj o2:i3 o2:address o2:a3

  val o2:a1 o2:city   Grenoble
  val o2:a2 o2:city   Paris
  val o2:a3 o2:city   Paris

  obj o2:a1 o2:ownedBy o2:i2
  obj o2:a2 o2:ownedBy o2:i3
  obj o2:a3 o2:ownedBy o2:i1

;;
```

1.1 Iteration 0

$K_{person, inhabitant}$:

	$\exists \langle \text{lastname}, \text{name} \rangle$	$\exists \langle \text{lastname}, \text{given} \rangle$	$\forall \exists \langle \text{lastname}, \text{name} \rangle$	$\forall \exists \langle \text{lastname}, \text{given} \rangle$	$\forall \langle \text{lastname}, \text{name} \rangle$	$\forall \langle \text{lastname}, \text{given} \rangle$
$\langle p_3, i_2 \rangle$	×		×		×	
$\langle p_3, i_3 \rangle$	×		×		×	
$\langle p_3, i_1 \rangle$						
$\langle p_1, i_2 \rangle$						
$\langle p_1, i_3 \rangle$						
$\langle p_1, i_1 \rangle$	×		×		×	
$\langle p_2, i_2 \rangle$	×		×		×	
$\langle p_2, i_3 \rangle$	×		×		×	
$\langle p_2, i_1 \rangle$						

$K_{\text{house,place}}$:

	$\exists \langle \text{city}, \text{city} \rangle$	$\forall \exists \langle \text{city}, \text{city} \rangle$	$\forall \langle \text{city}, \text{city} \rangle$
$\langle h_3, a_2 \rangle$	×	×	×
$\langle h_3, a_3 \rangle$	×	×	×
$\langle h_3, a_1 \rangle$			
$\langle h_1, a_2 \rangle$			
$\langle h_1, a_3 \rangle$			
$\langle h_1, a_1 \rangle$	×	×	×
$\langle h_2, a_2 \rangle$	×	×	×
$\langle h_2, a_3 \rangle$	×	×	×
$\langle h_2, a_1 \rangle$			

$R_{\text{home,address}}$:

	$\langle h_3, a_2 \rangle$	$\langle h_3, a_3 \rangle$	$\langle h_3, a_1 \rangle$	$\langle h_1, a_2 \rangle$	$\langle h_1, a_3 \rangle$	$\langle h_1, a_1 \rangle$	$\langle h_2, a_2 \rangle$	$\langle h_2, a_3 \rangle$	$\langle h_2, a_1 \rangle$
$\langle p_3, i_2 \rangle$	×								
$\langle p_3, i_3 \rangle$		×							
$\langle p_3, i_1 \rangle$			×						
$\langle p_1, i_2 \rangle$				×					
$\langle p_1, i_3 \rangle$					×				
$\langle p_1, i_1 \rangle$						×			
$\langle p_2, i_2 \rangle$							×		
$\langle p_2, i_3 \rangle$								×	
$\langle p_2, i_1 \rangle$									×

$R_{\text{owner,ownedBy}}$:

	$\langle p_3, i_2 \rangle$	$\langle p_3, i_3 \rangle$	$\langle p_3, i_1 \rangle$	$\langle p_1, i_2 \rangle$	$\langle p_1, i_3 \rangle$	$\langle p_1, i_1 \rangle$	$\langle p_2, i_2 \rangle$	$\langle p_2, i_3 \rangle$	$\langle p_2, i_1 \rangle$
$\langle h_3, a_2 \rangle$					×				
$\langle h_3, a_3 \rangle$						×			
$\langle h_3, a_1 \rangle$				×					
$\langle h_1, a_2 \rangle$								×	
$\langle h_1, a_3 \rangle$									×
$\langle h_1, a_1 \rangle$							×		
$\langle h_2, a_2 \rangle$		×							
$\langle h_2, a_3 \rangle$			×						
$\langle h_2, a_1 \rangle$	×								

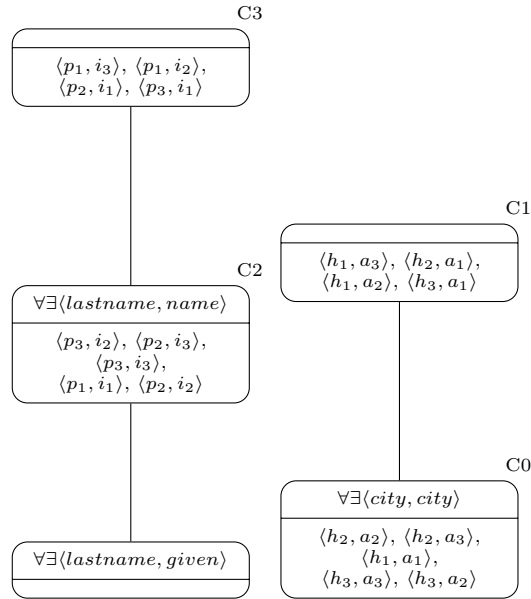
1.2 Iteration 1

$K_{\text{person,inhabitant}}$:

	$\exists(\text{lastname, name})$	$\exists(\text{lastname, given})$	$\forall\exists(\text{lastname, name})$	$\forall\exists(\text{lastname, given})$	$\forall(\text{lastname, name})$	$\forall(\text{lastname, given})$	$\exists(\text{home, address})_{C0}$	$\forall\exists(\text{home, address})_{C0}$	$\forall(\text{home, address})_{C0}$	$\exists(\text{home, address})_{C1}$	$\forall\exists(\text{home, address})_{C1}$	$\forall(\text{home, address})_{C1}$
$\langle p_3, i_2 \rangle$	x		x		x		x	x	x	x	x	x
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x	x
$\langle p_3, i_1 \rangle$									x	x	x	x
$\langle p_1, i_2 \rangle$									x	x	x	x
$\langle p_1, i_3 \rangle$									x	x	x	x
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x	x
$\langle p_2, i_3 \rangle$	x		x		x		x	x	x	x	x	x
$\langle p_2, i_1 \rangle$									x	x	x	x

$K_{\text{house,place}}$:

	$\exists(\text{city, city})$	$\forall\exists(\text{city, city})$	$\forall(\text{city, city})$	$\exists(\text{owner, ownedBy})_{C2}$	$\forall\exists(\text{owner, ownedBy})_{C2}$	$\forall(\text{owner, ownedBy})_{C2}$	$\exists(\text{owner, ownedBy})_{C3}$	$\forall\exists(\text{owner, ownedBy})_{C3}$	$\forall(\text{owner, ownedBy})_{C3}$
$\langle h_3, a_2 \rangle$	x	x	x				x	x	x
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$							x	x	x
$\langle h_1, a_2 \rangle$				x	x	x	x	x	x
$\langle h_1, a_3 \rangle$							x	x	x
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x				x	x	x
$\langle h_2, a_1 \rangle$				x	x	x	x	x	x



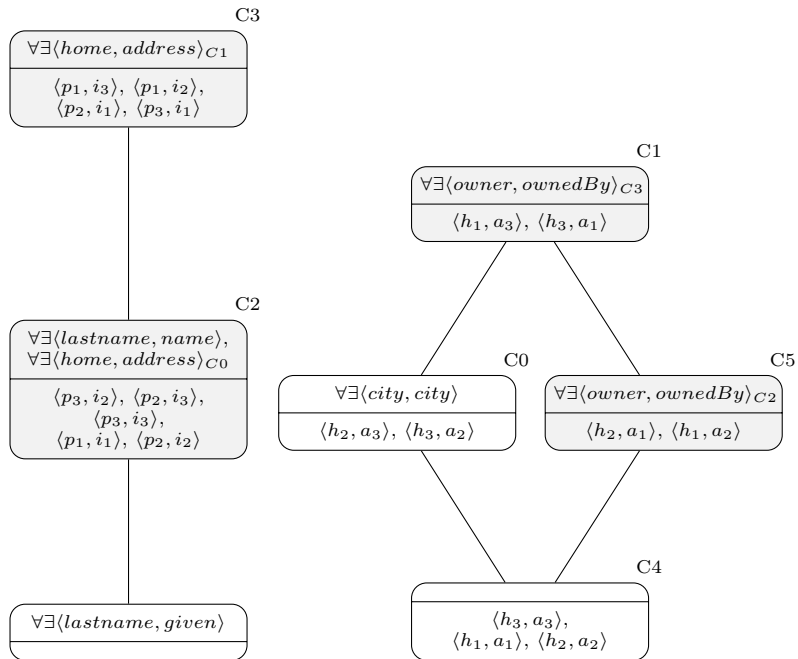
1.3 Iteration 2

$K_{\text{person,inhabitant}}$:

	$\exists(\text{lastname, name})$	$\exists(\text{lastname, given})$	$\forall\exists(\text{lastname, name})$	$\forall\exists(\text{lastname, given})$	$\forall(\text{lastname, name})$	$\forall(\text{lastname, given})$	$\exists(\text{home, address})_{C4}$	$\forall\exists(\text{home, address})_{C4}$	$\forall(\text{home, address})_{C4}$	$\exists(\text{home, address})_{C0}$	$\forall\exists(\text{home, address})_{C0}$	$\forall(\text{home, address})_{C0}$	$\exists(\text{home, address})_{C1}$	$\forall\exists(\text{home, address})_{C1}$	$\forall(\text{home, address})_{C1}$	$\exists(\text{home, address})_{C5}$	$\forall\exists(\text{home, address})_{C5}$	$\forall(\text{home, address})_{C5}$
$\langle p_3, i_2 \rangle$	x		x		x				x	x	x	x	x	x				
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_3, i_1 \rangle$													x	x	x			
$\langle p_1, i_2 \rangle$													x	x	x	x	x	x
$\langle p_1, i_3 \rangle$													x	x	x			
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_3 \rangle$	x		x		x								x	x	x			
$\langle p_2, i_1 \rangle$										x	x	x	x	x	x			

$K_{\text{house,place}}$:

	$\exists(\text{city, city})$	$\forall\exists(\text{city, city})$	$\forall(\text{city, city})$	$\exists(\text{owner, ownedBy})_{C2}$	$\forall\exists(\text{owner, ownedBy})_{C2}$	$\forall(\text{owner, ownedBy})_{C2}$	$\exists(\text{owner, ownedBy})_{C3}$	$\forall\exists(\text{owner, ownedBy})_{C3}$	$\forall(\text{owner, ownedBy})_{C3}$
$\langle h_3, a_2 \rangle$	x	x	x				x	x	x
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$							x	x	x
$\langle h_1, a_2 \rangle$				x	x	x	x	x	x
$\langle h_1, a_3 \rangle$							x	x	x
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x				x	x	x
$\langle h_2, a_1 \rangle$				x	x	x	x	x	x



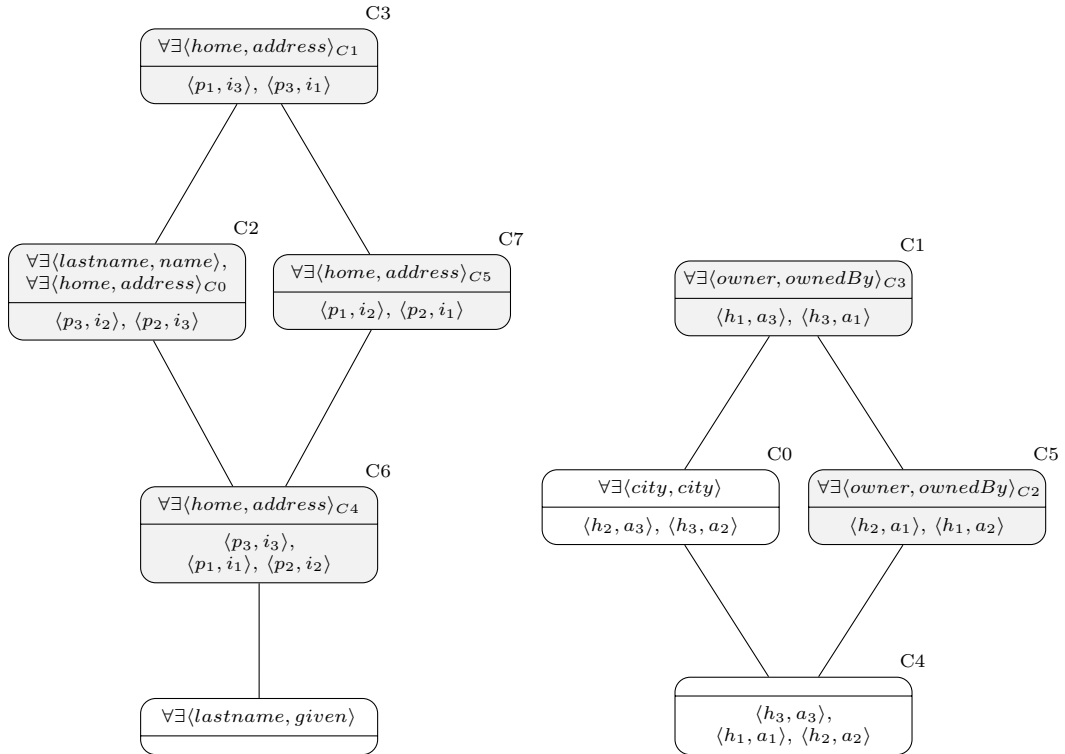
1.4 Iteration 3

$K_{\text{person, inhabitant}}$:

	$\exists(\text{lastname, name})$	$\exists(\text{lastname, given})$	$\forall\exists(\text{lastname, name})$	$\forall\exists(\text{lastname, given})$	$\forall(\text{lastname, name})$	$\forall(\text{lastname, given})$	$\exists(\text{home, address})_{C4}$	$\forall\exists(\text{home, address})_{C4}$	$\forall(\text{home, address})_{C4}$	$\exists(\text{home, address})_{C0}$	$\forall\exists(\text{home, address})_{C0}$	$\forall(\text{home, address})_{C0}$	$\exists(\text{home, address})_{C1}$	$\forall\exists(\text{home, address})_{C1}$	$\forall(\text{home, address})_{C1}$	$\exists(\text{home, address})_{C5}$	$\forall\exists(\text{home, address})_{C5}$	$\forall(\text{home, address})_{C5}$
$\langle p_3, i_2 \rangle$	x		x		x				x	x	x	x	x	x	x			
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_3, i_1 \rangle$													x	x	x			
$\langle p_1, i_2 \rangle$													x	x	x	x	x	x
$\langle p_1, i_3 \rangle$													x	x	x			
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_3 \rangle$	x		x		x					x	x	x	x	x	x			
$\langle p_2, i_1 \rangle$													x	x	x	x	x	x

$K_{\text{house,place}}$:

	$\exists(\text{city, city})$	$\forall\exists(\text{city, city})$	$\forall(\text{city, city})$	$\exists(\text{owner, ownedBy})_{C2}$	$\forall\exists(\text{owner, ownedBy})_{C2}$	$\forall(\text{owner, ownedBy})_{C2}$	$\exists(\text{owner, ownedBy})_{C6}$	$\forall\exists(\text{owner, ownedBy})_{C6}$	$\forall(\text{owner, ownedBy})_{C6}$	$\exists(\text{owner, ownedBy})_{C3}$	$\forall\exists(\text{owner, ownedBy})_{C3}$	$\forall(\text{owner, ownedBy})_{C3}$	$\exists(\text{owner, ownedBy})_{C7}$	$\forall\exists(\text{owner, ownedBy})_{C7}$	$\forall(\text{owner, ownedBy})_{C7}$
$\langle h_3, a_2 \rangle$	x	x	x							x	x	x			
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$										x	x	x	x	x	x
$\langle h_1, a_2 \rangle$				x	x	x				x	x	x			
$\langle h_1, a_3 \rangle$										x	x	x	x	x	x
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x							x	x	x			
$\langle h_2, a_1 \rangle$				x	x	x				x	x	x			



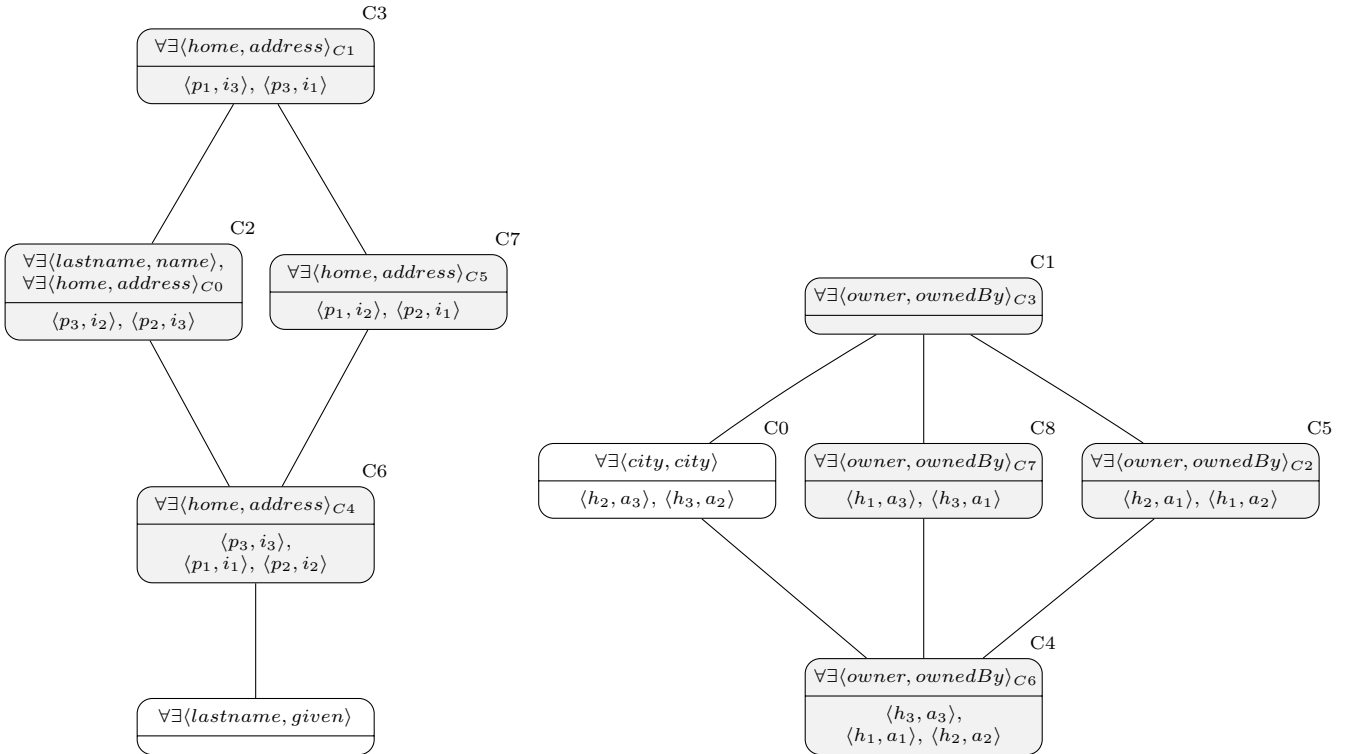
1.5 Iteration 4

$K_{\text{person, inhabitant}}$:

	$\exists(\text{lastname, name})$	$\exists(\text{lastname, given})$	$\forall\exists(\text{lastname, name})$	$\forall\exists(\text{lastname, given})$	$\forall(\text{lastname, name})$	$\forall(\text{lastname, given})$	$\exists(\text{home, address})_{C4}$	$\forall\exists(\text{home, address})_{C4}$	$\forall(\text{home, address})_{C4}$	$\exists(\text{home, address})_{C0}$	$\forall\exists(\text{home, address})_{C0}$	$\forall(\text{home, address})_{C0}$	$\exists(\text{home, address})_{C8}$	$\forall\exists(\text{home, address})_{C8}$	$\forall(\text{home, address})_{C8}$	$\exists(\text{home, address})_{C1}$	$\forall\exists(\text{home, address})_{C1}$	$\forall(\text{home, address})_{C1}$	$\exists(\text{home, address})_{C5}$	$\forall\exists(\text{home, address})_{C5}$	$\forall(\text{home, address})_{C5}$	
$\langle p_3, i_2 \rangle$	x		x		x					x	x				x	x	x	x				
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
$\langle p_3, i_1 \rangle$													x	x	x	x	x	x				
$\langle p_1, i_2 \rangle$																x	x	x	x			
$\langle p_1, i_3 \rangle$													x	x	x	x	x	x	x	x	x	x
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_3 \rangle$	x		x		x					x	x					x	x	x				
$\langle p_2, i_1 \rangle$																x	x	x	x	x	x	x

$K_{\text{house,place}}$:

	$\exists(\text{city, city})$	$\forall\exists(\text{city, city})$	$\forall(\text{city, city})$	$\exists(\text{owner, ownedBy})_{C2}$	$\forall\exists(\text{owner, ownedBy})_{C2}$	$\forall(\text{owner, ownedBy})_{C2}$	$\exists(\text{owner, ownedBy})_{C6}$	$\forall\exists(\text{owner, ownedBy})_{C6}$	$\forall(\text{owner, ownedBy})_{C6}$	$\exists(\text{owner, ownedBy})_{C3}$	$\forall\exists(\text{owner, ownedBy})_{C3}$	$\forall(\text{owner, ownedBy})_{C3}$	$\exists(\text{owner, ownedBy})_{C7}$	$\forall\exists(\text{owner, ownedBy})_{C7}$	$\forall(\text{owner, ownedBy})_{C7}$
$\langle h_3, a_2 \rangle$	x	x	x							x	x	x			
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$										x	x	x	x	x	x
$\langle h_1, a_2 \rangle$				x	x	x				x	x	x			
$\langle h_1, a_3 \rangle$										x	x	x	x	x	x
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x							x	x	x			
$\langle h_2, a_1 \rangle$				x	x	x				x	x	x			



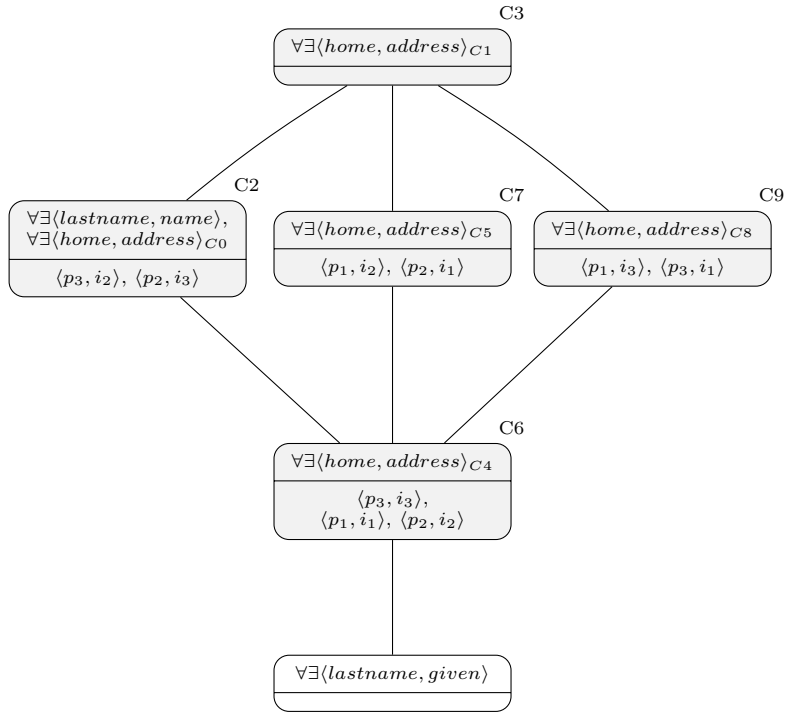
1.6 Iteration 5

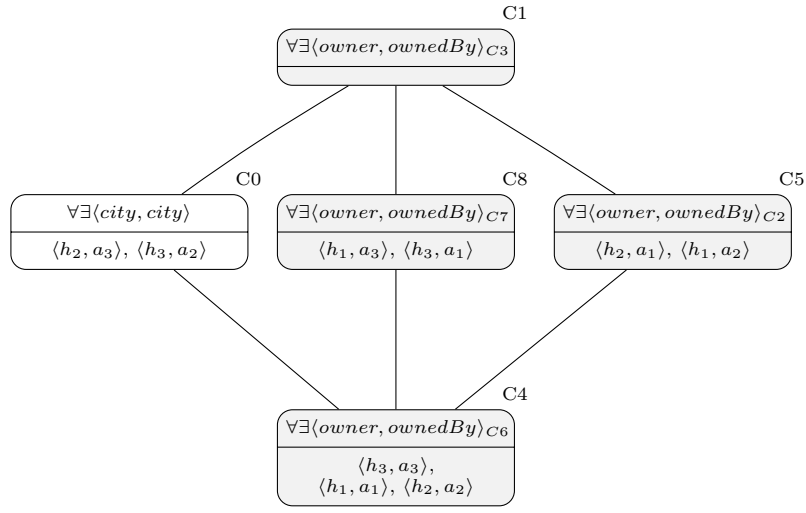
$K_{\text{person, inhabitant}}$:

	$\exists(\text{lastname, name})$	$\exists(\text{lastname, given})$	$\forall\exists(\text{lastname, name})$	$\forall\exists(\text{lastname, given})$	$\forall(\text{lastname, name})$	$\forall(\text{lastname, given})$	$\exists(\text{home, address})_{C4}$	$\forall\exists(\text{home, address})_{C4}$	$\forall(\text{home, address})_{C4}$	$\exists(\text{home, address})_{C0}$	$\forall\exists(\text{home, address})_{C0}$	$\forall(\text{home, address})_{C0}$	$\exists(\text{home, address})_{C8}$	$\forall\exists(\text{home, address})_{C8}$	$\forall(\text{home, address})_{C8}$	$\exists(\text{home, address})_{C1}$	$\forall\exists(\text{home, address})_{C1}$	$\forall(\text{home, address})_{C1}$	$\exists(\text{home, address})_{C5}$	$\forall\exists(\text{home, address})_{C5}$	$\forall(\text{home, address})_{C5}$
$\langle p_3, i_2 \rangle$	x		x		x				x	x	x				x	x	x				
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x				x	x	x			x	x
$\langle p_3, i_1 \rangle$													x	x	x	x	x				
$\langle p_1, i_2 \rangle$															x	x	x				
$\langle p_1, i_3 \rangle$													x	x	x	x	x				
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x		x	x	x	x	x			x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x		x	x	x	x	x			x	x
$\langle p_2, i_3 \rangle$	x		x		x				x	x	x				x	x	x				
$\langle p_2, i_1 \rangle$															x	x	x			x	x

$K_{\text{house, place}}$:

	$\exists(\text{city, city})$	$\forall\exists(\text{city, city})$	$\forall(\text{city, city})$	$\exists(\text{owner, ownedBy})_{C2}$	$\forall\exists(\text{owner, ownedBy})_{C2}$	$\forall(\text{owner, ownedBy})_{C2}$	$\exists(\text{owner, ownedBy})_{C6}$	$\forall\exists(\text{owner, ownedBy})_{C6}$	$\forall(\text{owner, ownedBy})_{C6}$	$\exists(\text{owner, ownedBy})_{C3}$	$\forall\exists(\text{owner, ownedBy})_{C3}$	$\forall(\text{owner, ownedBy})_{C3}$	$\exists(\text{owner, ownedBy})_{C9}$	$\forall\exists(\text{owner, ownedBy})_{C9}$	$\forall(\text{owner, ownedBy})_{C9}$	$\exists(\text{owner, ownedBy})_{C7}$	$\forall\exists(\text{owner, ownedBy})_{C7}$	$\forall(\text{owner, ownedBy})_{C7}$
$\langle h_3, a_2 \rangle$	x	x	x							x	x	x						
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$										x	x	x				x	x	x
$\langle h_1, a_2 \rangle$				x	x	x				x	x	x						
$\langle h_1, a_3 \rangle$										x	x	x				x	x	x
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x							x	x	x	x	x	x			
$\langle h_2, a_1 \rangle$				x	x	x				x	x	x						





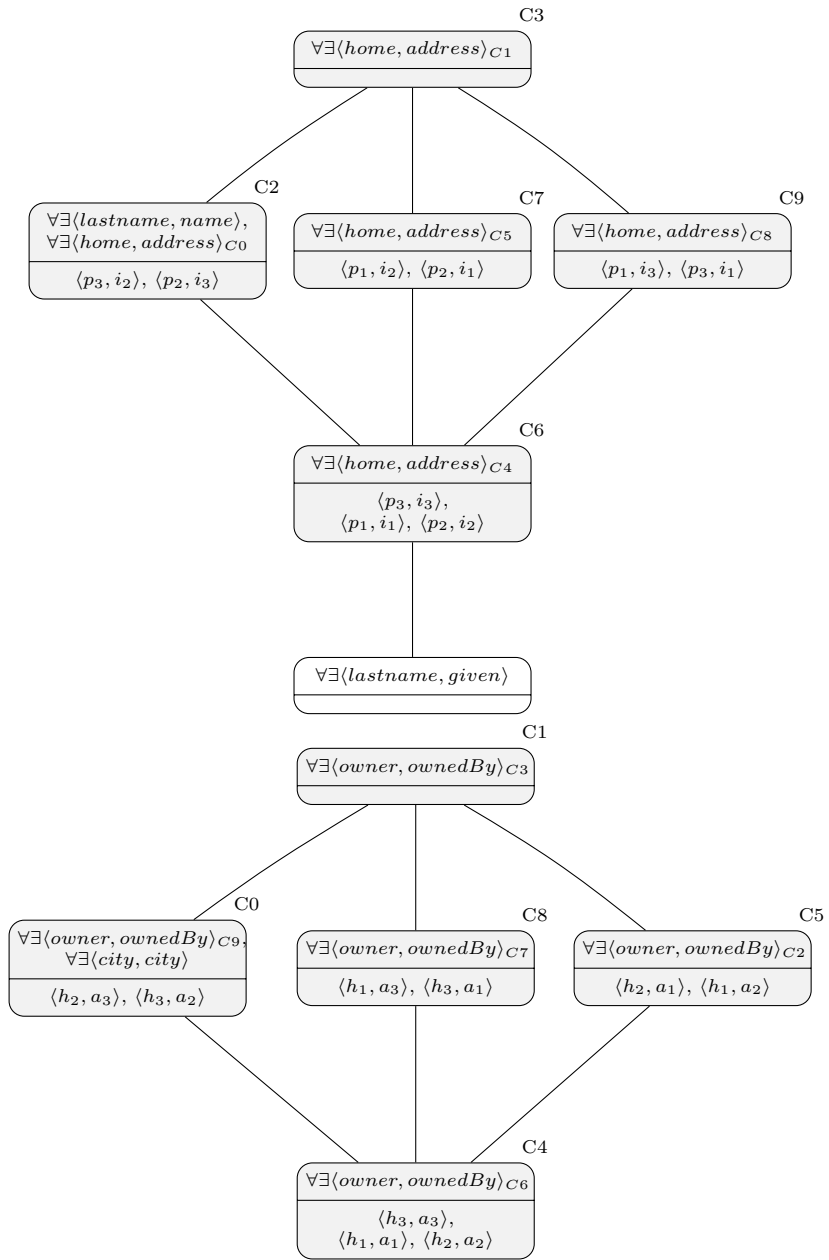
1.7 Iteration 6

$K_{\text{person, inhabitant}}$:

	$\exists(\text{lastname}, \text{name})$	$\exists(\text{lastname}, \text{given})$	$\forall\exists(\text{lastname}, \text{name})$	$\forall\exists(\text{lastname}, \text{given})$	$\forall(\text{lastname}, \text{name})$	$\forall(\text{lastname}, \text{given})$	$\exists(\text{home}, \text{address})_{C4}$	$\forall\exists(\text{home}, \text{address})_{C4}$	$\forall(\text{home}, \text{address})_{C4}$	$\exists(\text{home}, \text{address})_{C0}$	$\forall\exists(\text{home}, \text{address})_{C0}$	$\forall(\text{home}, \text{address})_{C0}$	$\exists(\text{home}, \text{address})_{C8}$	$\forall\exists(\text{home}, \text{address})_{C8}$	$\forall(\text{home}, \text{address})_{C8}$	$\exists(\text{home}, \text{address})_{C1}$	$\forall\exists(\text{home}, \text{address})_{C1}$	$\forall(\text{home}, \text{address})_{C1}$	$\exists(\text{home}, \text{address})_{C5}$	$\forall\exists(\text{home}, \text{address})_{C5}$	$\forall(\text{home}, \text{address})_{C5}$	
$\langle p_3, i_2 \rangle$	x		x		x					x	x	x			x	x	x	x				
$\langle p_3, i_3 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_3, i_1 \rangle$													x	x	x	x	x	x	x			
$\langle p_1, i_2 \rangle$																x	x	x	x			
$\langle p_1, i_3 \rangle$													x	x	x	x	x	x				
$\langle p_1, i_1 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_2 \rangle$	x		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle p_2, i_3 \rangle$	x		x		x					x	x	x				x	x	x	x			
$\langle p_2, i_1 \rangle$																x	x	x	x	x	x	x

$K_{\text{house, place}}$:

	$\exists(\text{city}, \text{city})$	$\forall\exists(\text{city}, \text{city})$	$\forall(\text{city}, \text{city})$	$\exists(\text{owner}, \text{ownedBy})_{C2}$	$\forall\exists(\text{owner}, \text{ownedBy})_{C2}$	$\forall(\text{owner}, \text{ownedBy})_{C2}$	$\exists(\text{owner}, \text{ownedBy})_{C6}$	$\forall\exists(\text{owner}, \text{ownedBy})_{C6}$	$\forall(\text{owner}, \text{ownedBy})_{C6}$	$\exists(\text{owner}, \text{ownedBy})_{C3}$	$\forall\exists(\text{owner}, \text{ownedBy})_{C3}$	$\forall(\text{owner}, \text{ownedBy})_{C3}$	$\exists(\text{owner}, \text{ownedBy})_{C9}$	$\forall\exists(\text{owner}, \text{ownedBy})_{C9}$	$\forall(\text{owner}, \text{ownedBy})_{C9}$	$\exists(\text{owner}, \text{ownedBy})_{C7}$	$\forall\exists(\text{owner}, \text{ownedBy})_{C7}$	$\forall(\text{owner}, \text{ownedBy})_{C7}$	
$\langle h_3, a_2 \rangle$	x	x	x							x	x	x							
$\langle h_3, a_3 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_3, a_1 \rangle$																x	x	x	
$\langle h_1, a_2 \rangle$				x	x	x				x	x	x							
$\langle h_1, a_3 \rangle$										x	x	x				x	x	x	
$\langle h_1, a_1 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_2 \rangle$	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
$\langle h_2, a_3 \rangle$	x	x	x							x	x	x							
$\langle h_2, a_1 \rangle$				x	x	x				x	x	x							



1.8 Iteration 7 (convergence)

