

pilar

PILAR OR nodes

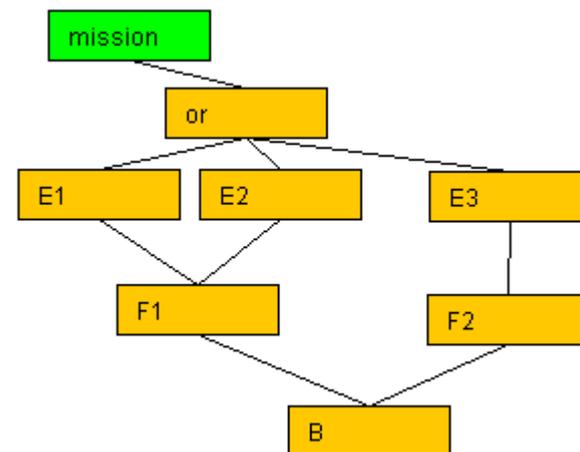
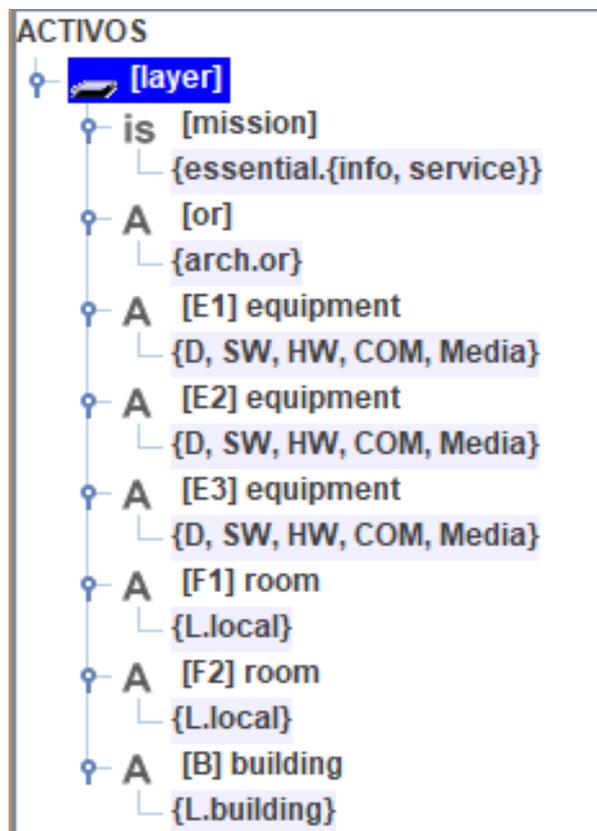
José A. Mañas <jmanas@ar-tools.com>

October, 2019



or-nodes

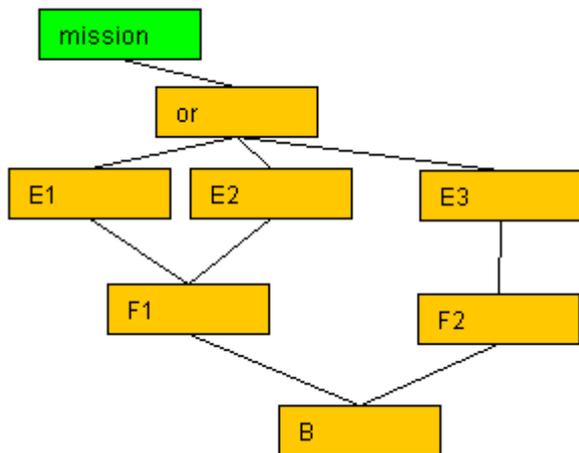
- OR-nodes appear to model redundant (alternative) dependencies between assets





value propagation

- assets value (that is, security requirements level) is transferred along or-nodes, but for availability that is forgot unless branches recombine into a common point of failure

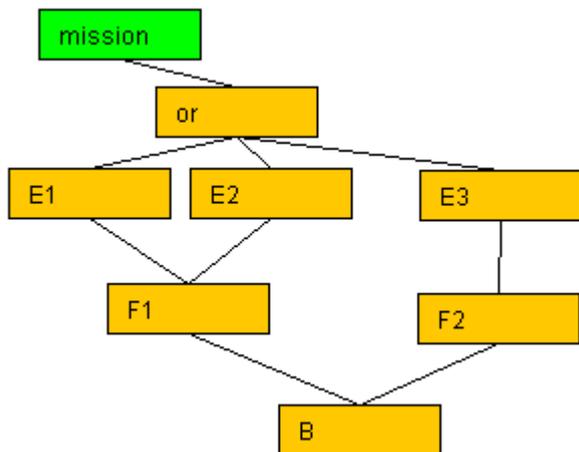


ASSETS							
[layer]							
is	[mission]	[4]	[4]	[4]	[4]	[4]	[4]
A	[or]	[4]	[4]	[4]	[4]	[4]	[4]
A	[E1] equipment		[4]	[4]	[4]	[4]	[4]
A	[E2] equipment		[4]	[4]	[4]	[4]	[4]
A	[E3] equipment		[4]	[4]	[4]	[4]	[4]
A	[F1] room		[4]	[4]	[4]	[4]	[4]
A	[F2] room		[4]	[4]	[4]	[4]	[4]
A	[B] building	[4]	[4]	[4]	[4]	[4]	[4]



value propagation

- assets values (that is, security requirements levels) are transferred through or-nodes, except for availability, that is forgotten, unless branches recombine into a common point of failure

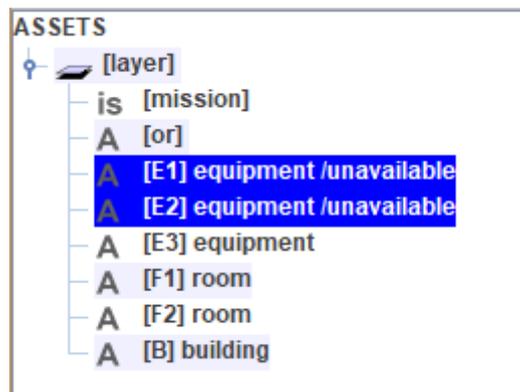
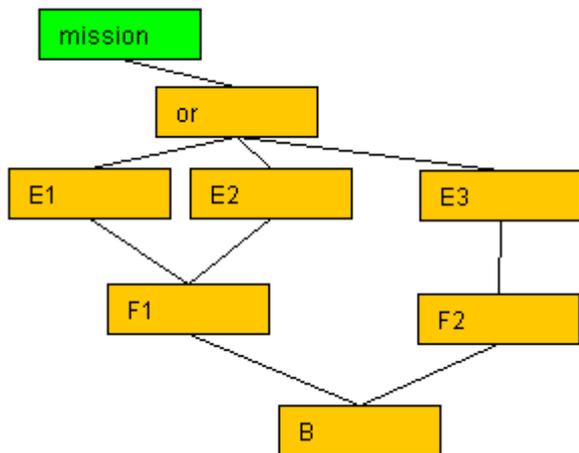


asset	[A]	[I]	[C]	[Auth]	[Acc]	[V]	[PD]
ASSETS							
[layer]							
is [mission]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
A [or]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
A [E1] equipment		[4]	[4]	[4]	[4]	[4]	[4]
A [E2] equipment	[6]	[4]	[4]	[4]	[4]	[4]	[4]
A [E3] equipment		[4]	[4]	[4]	[4]	[4]	[4]
A [F1] room	[6]	[4]	[4]	[4]	[4]	[4]	[4]
A [F2] room		[4]	[4]	[4]	[4]	[4]	[4]
A [B] building	[6]	[4]	[4]	[4]	[4]	[4]	[4]



when assets are unavailable

- if all assets under OR, but one, become unavailable; the remaining one becomes critical



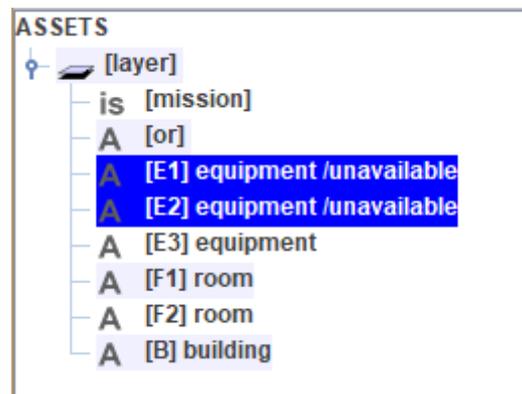
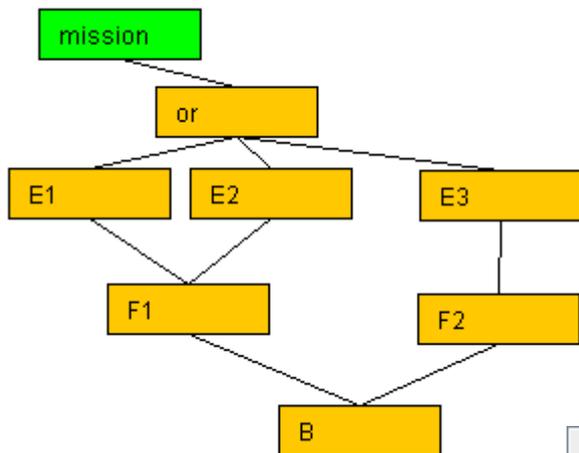
asset	[A]	[I]	[C]	[Auth]	[Acc]	[M]	[PD]
ASSETS							
└ [layer]							
└ is [mission]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
└ A [or]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
└ A [E1] equipment /unavailable		[4]	[4]	[4]	[4]	[4]	[4]
└ A [E2] equipment /unavailable		[4]	[4]	[4]	[4]	[4]	[4]
└ A [E3] equipment	[4]	[4]	[4]	[4]	[4]	[4]	[4]
└ A [F1] room		[4]	[4]	[4]	[4]	[4]	[4]
└ A [F2] room	[4]	[4]	[4]	[4]	[4]	[4]	[4]
└ A [B] building	[4]	[4]	[4]	[4]	[4]	[4]	[4]

maturity valuation



when assets are unavailable

- if all assets under OR, but one, become unavailable; the remaining one becomes critical



	asset	co...	freq...	[A]	[I]	[C]	[Auth]	[Acc]	[V]	[PD]
<input type="checkbox"/>	ASSETS									
<input type="checkbox"/>	└─ [layer]									
<input type="checkbox"/>	└─ is [mission]									
<input type="checkbox"/>	└─ A [or]									
<input type="checkbox"/>	└─ A [E1] equipment /unavailab				T	T	T			
<input type="checkbox"/>	└─ A [E2] equipment /unavailab				T	T	T			
<input type="checkbox"/>	└─ A [E3] equipment			T	T	T	T			
<input type="checkbox"/>	└─ A [F1] room									
<input type="checkbox"/>	└─ A [F2] room			T						
<input type="checkbox"/>	└─ A [B] building			T						

maturity valuation