

SPD Taxonomy: technology table

Technology (1):				
SPD Domain (2):				
Functionalities (3)				
General Parameters (4)	Name (4)		Metric (5)	Range (6)
(Technological) Domain specific parameters (7)	Name		Metric	Range
Note:				

- (1) Name of a specific technology that we will introduce in the SHIELD Framework (it could be hardware, software, algorithm, procedure,...)
- (2) Security and/or Privacy and/or Dependability
- (3) Functionalities that the technology will provide within the mentioned domain
- (4) General parameters to describe the technology
- (5) Metrics applicable to the selected parameter
- (6) Range of variation of the metric
- (7) Parameters peculiar of the specific technology/domain and/or relevant in the scope of the SHIELD framework.

Example A

Technology (1):		Chip for asymmetric cryptography		
SPD Domain (2):		Security	Privacy	
Functionalities (3)		Data encryption	Data encryption	
		Digital Signature		
		Authentication		
General Parameters (4)	Name (4)		Metric (5)	Range (6)
	Type		Discrete value	HW-SW
	Size		Discrete value	Small-Medium-Large
	Number of input		integer	0-64
	Number of output		integer	0-64
	Power supply		Type	Battery - network
	Clock Frequency		Hz	1Mhz-1Ghz
(Technological) Domain specific parameters (7)	Name		Metric	Range
	Used encryption algorithm		Discrete value	--
	Key length		bit	128-2048
	Power consumption		mW per second	0.01-0.1
	Input/Output data rate		kbps	10-10.000
	Byte encryption time		ms/byte	0.001-0.1
	Resistance to brute force attack		days	0-1B
Note:	A similar table could be written for EACH encryption algorithm supported by the chip, so the technological domain specific parameters become different for each algorithm table.			

Example B

Technology (1):		Overlay		
SPD Domain (2):		Security	Privacy	Dependability
Functionalities (3)		Monitoring	Monitoring	Monitoring
		Discovery	Discovery	Discovery
		Composition	Composition	Composition
General Parameters (4)	Name (4)		Metric (5)	Range (6)
	Type		Discrete value	HW-SW
	HW requirements to run overlay (CPU)		Hz	1Mhz-1Ghz
	HW requirements to run overlay (Memory)		Byte	1MB-1GB
	SW requirements to run		OS	--
(Technological) Domain specific parameters (7)	Name		Metric	Range
	Maximum number of managed entities		integer	1-1.000
	Time for complete discovery (most likely it is a function of the number of entities)		s	1-600
	Time for composition (most likely it is a function of the number of entities)		s	1-600
	Reaction time (monitoring)		s	0.1-5
	Supported Discovery Protocol		Discrete value	--
Note:	A similar table could be written for EACH supported discovery protocol			