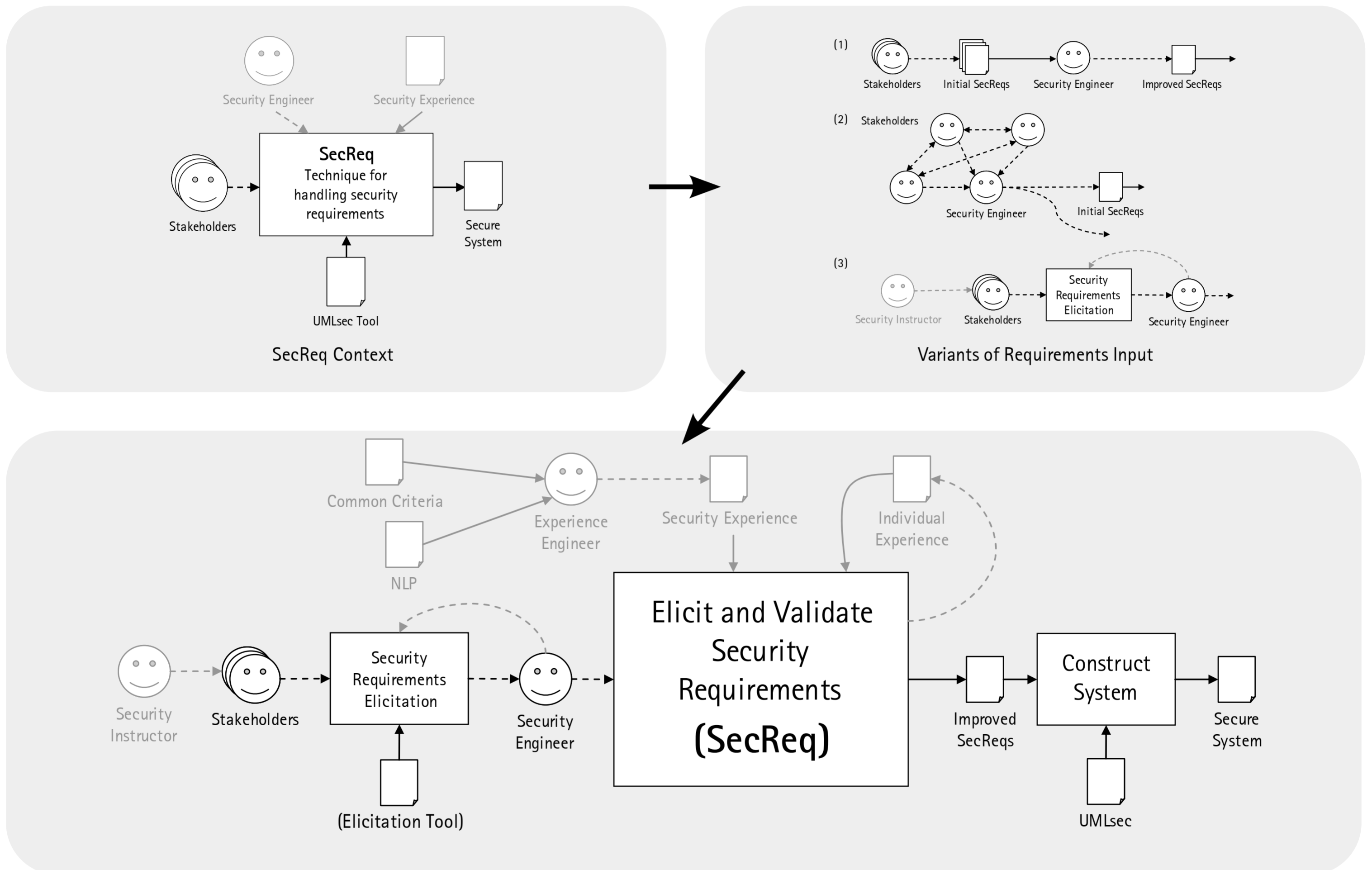


Visualizing Informal Communication

with FLOW

by Kurt Schneider, Kai Stapel, and Eric Knauss

Security Requirements Example



Information Flow in Related Notations

Table 1. Symbols to Visualize Information Flow Aspects (Syntax)

Concept	FLOW	DFD	UML Activity Diagram	Little-JIL	RCSN
Information store	Person (fluid), Document (solid)	Data store, External	Data store stereotype	Parameters, Agents	Persons
Information flow	Dashed arrows (fluid) Solid arrows (solid)	Data flow arrow	Data/object flow edge	Parameters with control flow	Communication flow
Distinction of solid and fluid	Different symbols (see above)	No	Through Stereotypes	No	Style of arrow (color, etc.)
Explicit experience	Explicit edge color	No	Association stereotypes	Parameter type	No
Challenges when used for information flow modeling	No	Stakeholder as process, data store, or external? Labeling rules violated.	Requires stereotyping for symbols, extended meaning etc. Will look like FLOW when stereotyped.	Very fine-grained symbols, very detailed and abstract models due to its roots as a process programming language	Single req. flowing as observed in reality. Notation not fully defined, many symbols.

Table 2. Comparison of Notations: Purpose and Focus

Diagram type	FLOW	DFD	UML Activity Diagram	Little-JIL	RCSN
Main purpose	Process improvement by considering solid and fluid flows alike	System design	Process design	Process programming	RE awareness
Main object of interest	Information, in particular requirements	Data	Activities	Steps	Social network