

# **Generator Flow: An XML Configurable Design Pattern Used in NoGAP**

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(ITNG 2012)

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## **ABSTRACT**

A golden rule that must be followed when building any larger system, is to manage complexity. Without complexity management a system can only grow to a certain point before it collapses under its own complexity. One complexity management technique is the use of design patterns, which are architectural constructs that have proven their usefulness in handling certain design problems. This paper will describe Generator Flow, a design pattern used in No GAP an EDA tool developed at the department of EE, Linköping University. Generator Flow is a design pattern aimed at handling a succession of transformations performed on a number of data sets to reach some useful outputs. This paper also describes the XML based flow-configuration file, which is used to allow for runtime configuration of the transformation flow used in No GAP. No GAP is an EDA tool aimed at easing the design and verification of ASIP and programmable hardware accelerators. A problem faced when developing No GAP was how to handle the flow of transformations, from an input specification to useful outputs. It was in this context that the Generator Flow pattern was developed.