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Tech-On
EDA Online

< DAC 2007 > Functional verification pattern compilation tool
utilizing graph-based technology from the United States company,
Breker

DATE: 2007/06/18 20:28

KEYWORDS: functional verification/simulation CAE/logical
エミュ/simulator *

CAPTION: Adnan Hamid, CEO of Breker, photographed in front of the
Breker booth at DAC 2007. *

CAPTION: Data flow of the Breker technology and the tool "Trek." *

CAPTION: Test plan (left) with analytical results after the simulation
(right) data, from Breker.

Breker Verification Systems, Inc., which invented the graph-based
functional verification pattern compilation technique, has developed
the EDA tool "Trek." The tool was introduced at the 44th Design of
Automation Conference (DAC 2007).

According to Breker, Trek breaks away from current functional
verification pattern compilation techniques for the ATPG of
constrained random pattern occurrences. With Breker's technology,
the user designates the functional verification specification as a
hierarchical graph. Breker calls the graph-based contents of the
functional verification, a test plan. Trek executes the check of the
user-defined test plan and the automatic generation of the test bench
using the test plan as the basis for coverage (etc.) of the simulation
results.

At the lowest layer in the graph of the test plan (the leaf), it is the
input transaction. The next level in the input scenario combines the
transaction of the input which is defined with the leaf. For example, a
user can say "REQ" and "ACK." The highest level involves the user-
defined graph compiling, executing and checking test benches. If
there are no problems,

Trek forms the test bench automatically. Breker guarantees 100% test
bench coverage vis-a-vis the test plan.

Trek outputs to both the logic simulator and the test bench formation
tool. With such usage, users can see that this Trek coverage analysis
tool is quite useful. Furthermore users can save from 11X to 14X in
functional verification man-hours, according to a Trek benchmark
that Breker provided.

* To DAC 2007 reporting specially installed sight.

Kojima Ikutarou, Nikkei Micro Devices

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