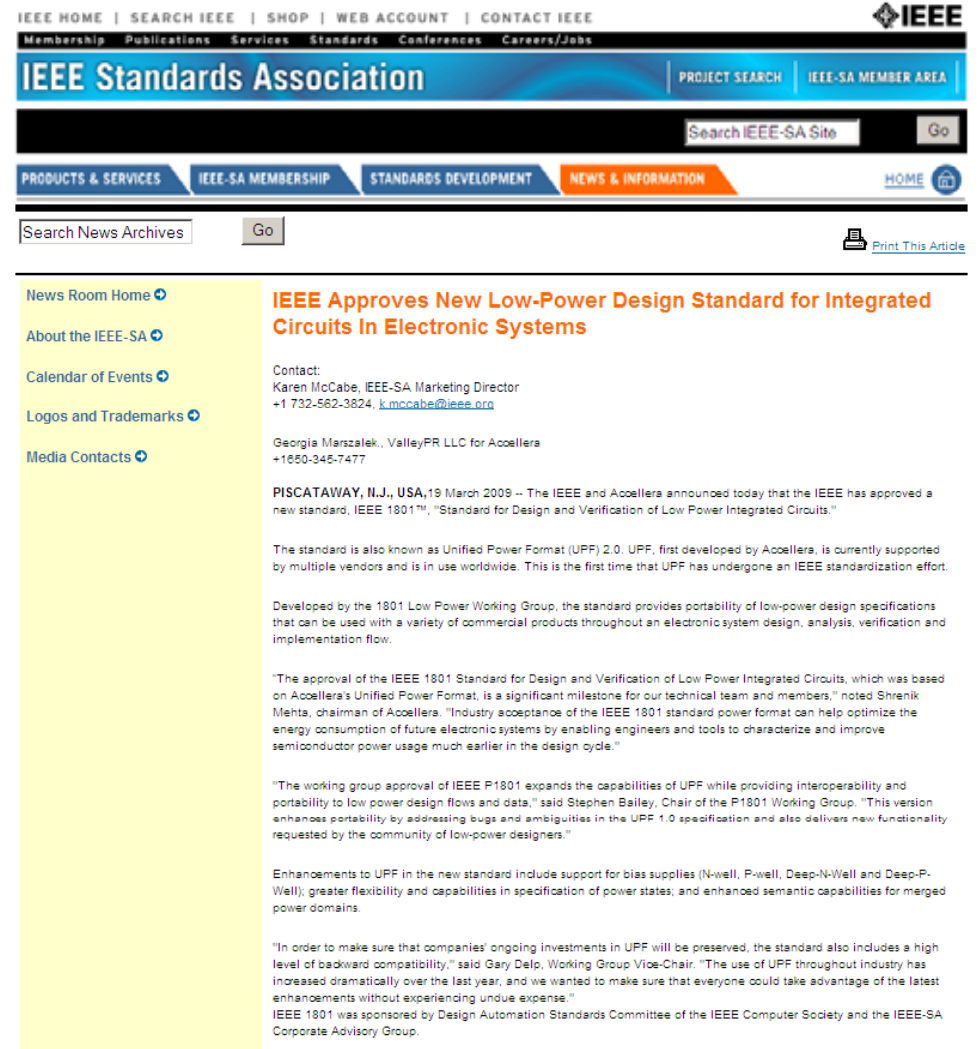


# **Flower (Low) Power: IEEE 1801 Committee Update**

Cary Chin  
Synopsys

# IEEE 1801 Status Update

- IEEE 1801™ Standard for Design and Verification of Low Power Integrated Circuits
- IEEE 1801-2009 approved March 19, 2009
- aka UPF 2.0
- Supported by (nearly) all EDA vendors



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### IEEE Approves New Low-Power Design Standard for Integrated Circuits In Electronic Systems

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PISCATAWAY, N.J., USA, 19 March 2009 -- The IEEE and Accellera announced today that the IEEE has approved a new standard, IEEE 1801™, "Standard for Design and Verification of Low Power Integrated Circuits."

The standard is also known as Unified Power Format (UPF) 2.0. UPF, first developed by Accellera, is currently supported by multiple vendors and is in use worldwide. This is the first time that UPF has undergone an IEEE standardization effort.

Developed by the 1801 Low Power Working Group, the standard provides portability of low-power design specifications that can be used with a variety of commercial products throughout an electronic system design, analysis, verification and implementation flow.

"The approval of the IEEE 1801 Standard for Design and Verification of Low Power Integrated Circuits, which was based on Accellera's Unified Power Format, is a significant milestone for our technical team and members," noted Shrenik Mehta, chairman of Accellera. "Industry acceptance of the IEEE 1801 standard power format can help optimize the energy consumption of future electronic systems by enabling engineers and tools to characterize and improve semiconductor power usage much earlier in the design cycle."

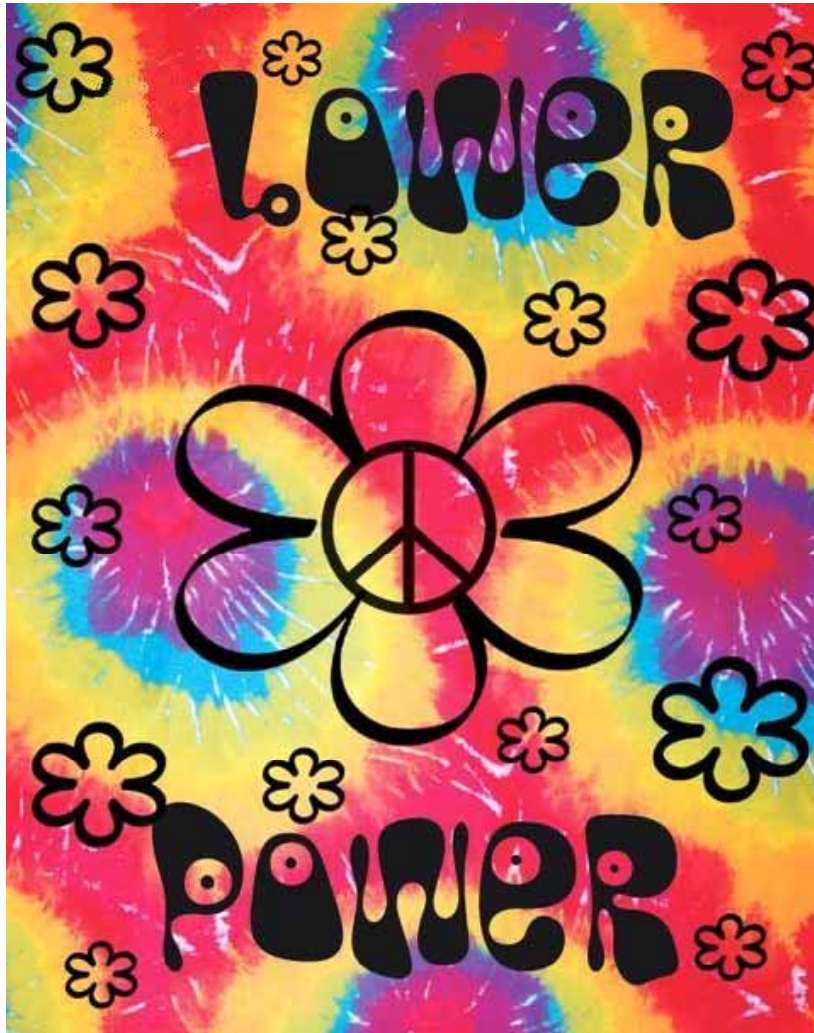
"The working group approval of IEEE P1801 expands the capabilities of UPF while providing interoperability and portability to low power design flows and data," said Stephen Bailey, Chair of the P1801 Working Group. "This version enhances portability by addressing bugs and ambiguities in the UPF 1.0 specification and also delivers new functionality requested by the community of low-power designers."

Enhancements to UPF in the new standard include support for bias supplies (N-well, P-well, Deep-N-Well and Deep-P-Well); greater flexibility and capabilities in specification of power states; and enhanced semantic capabilities for merged power domains.

"In order to make sure that companies' ongoing investments in UPF will be preserved, the standard also includes a high level of backward compatibility," said Gary Delp, Working Group Vice-Chair. "The use of UPF throughout industry has increased dramatically over the last year, and we wanted to make sure that everyone could take advantage of the latest enhancements without experiencing undue expense."

IEEE 1801 was sponsored by Design Automation Standards Committee of the IEEE Computer Society and the IEEE-SA Corporate Advisory Group.

# Ongoing work...



- IEEE 1801 working group continues...
- Chartered in September'09 by the IEEE to clarify and extend IEEE 1801

# IEEE 1801 WG

- IEEE 1801-2009
  - Corrections, clarifications, enhancements, extensions
    - Details of syntax and semantics
  - Track and maintain issues
  - Create “Sense of the workgroup – FAQ” document – examples & recommendations
  - Create next revision of the standard

# Call for participation

- IEEE 1801 WG
    - Gary Delp, Chair
    - John Biggs, Vice-chair
    - 10 companies
    - Open to others
  
  - Peace, Love, and Interoperability
- DON'T MISS THE BUS!**

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