

**2008 North American ICT Green Excellence of the Year Award****Cisco Systems**

Frost & Sullivan is pleased to award the 2008 North American Green Excellence of the Year Award in Technology Innovation to Cisco Systems for its innovative QuantumFlow Processor and for incorporating it in its new product ASR 1000 series router.

Cisco Systems has once again claimed its leadership as a technology powerhouse. Already well established, Cisco has further solidified its leadership with a commitment to innovation, and this time the superior technology innovation serves a bigger global agenda -- Green Technology.

What sets the Cisco QuantumFlow Processor apart is that it is the first networking chip with a large number (40) of integrated core processors. Per Cisco, with the ability to handle four threads per processor, it will be possible to handle 160 threads at once. With this technology, it is possible for a device to perform a greater number of discrete functions and also lead to actual power savings and smaller space requirements. The QuantumFlow processor is capable of up to 20 million packets-per-second forwarding rate performance with service features. This, Cisco claims, is nearly three times more powerful than the nearest competing platform. The QFProcessor has 800 million transistors, provides customized QoS and comes integrated with programmability. The ASR 1000 has 1.3 billion transistors (40 cores x 4 threads enable features to be run with high performance and scale, and no significant drop-off as features are added).

In spite of the fact that this technology took Cisco five years to develop, requiring more than 100 engineers and 40 patents, this award would have lacked gravity if Cisco would have not incorporated this into a device. But with the ASR 1000 series router, Cisco has taken the commitment to Green Technology one step further. Cisco claims that, with the QuantumFlow Processor, the ASR 1000 is able to provide several orders of magnitude greater performance, This is not reduced when the router is carrying out complex tasks, and it is capable of running stateful features without compromising on speed. This is of great significance since the device can perform complex tasks without having to compromise on speed. Considering that the telco service providers are actually banking on high-bandwidth applications to stave off competition from cable MSOs, this attribute directly meets a very important requirement.

The ASR 1000 series router is a powerful compact router that performs multi-device functions, while providing power savings and "instant-on" service delivery. Cisco

claims that competing products would require 47% more power. Available in 3, 8, and 12 slots, the ASR 1000 series provides Broadband Aggregation, Managed Services, Layer 3 VPN, Internet Peering, and Route Reflector services. In essence, it integrates the functions of six devices into one. These six devices being a security device, a Deep Packet Inspection (DPI)-capable device, a switch, a session border controller (SBC), a router, and a broadband aggregation device. This, intuitively, leads directly to space savings and power savings. Using software virtualization, Cisco has been able to deliver hitless upgrades without costly hardware redundancy. Cisco announced the product in March 2008 and soon announced a Tier-1 customer in NTT.

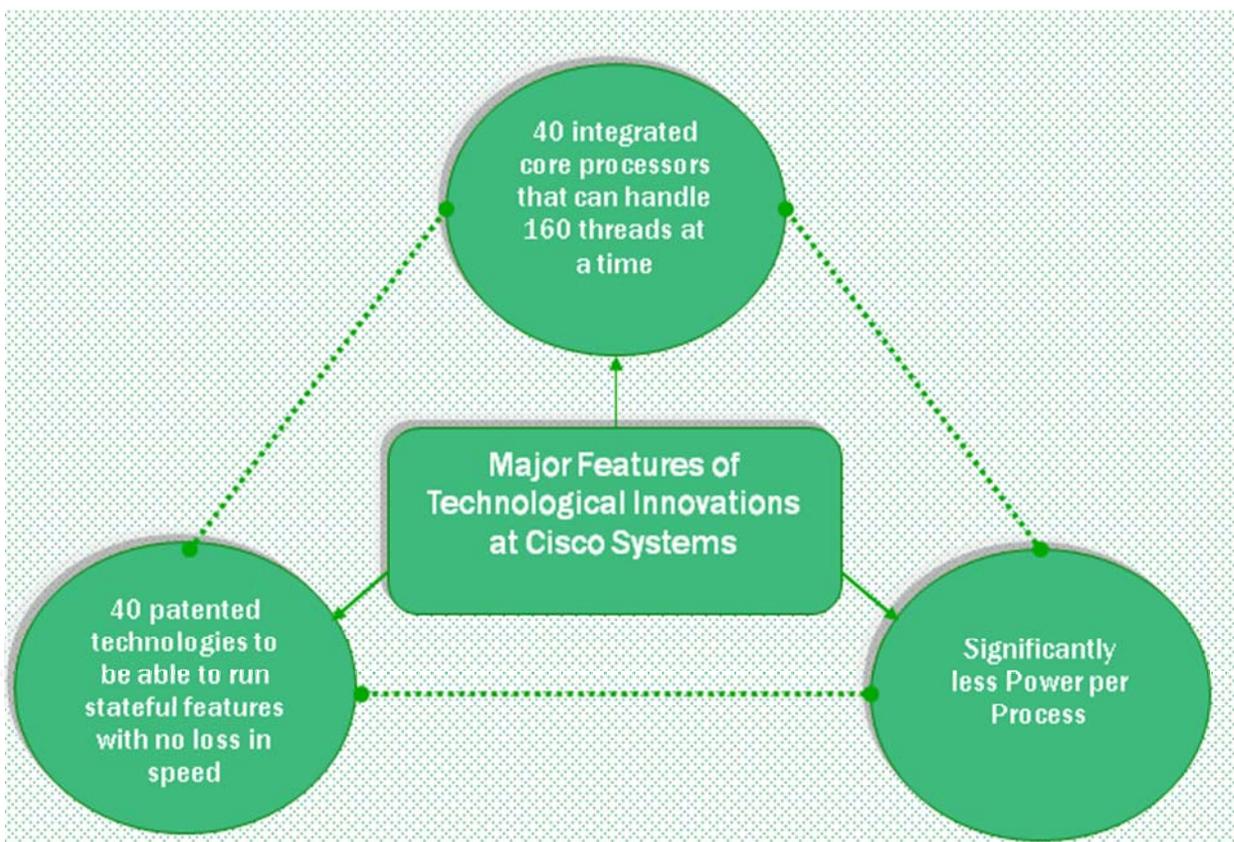


Chart 1.1 depicts the salient features of the Cisco QuantumFlow Processor. Cisco has truly revolutionized the networking chip industry with its QuantumFlow processor, and, with the combined software and hardware superiority of the ASR 1000, it has clearly made a commitment to being not only a market share leader, but, more importantly, a technology and innovation leader.

## Award Description

The Frost & Sullivan Green Excellence of the Year Award in Technology Innovation is presented to a company that has demonstrated superior technological advancement, which is aligned with a sustainable and environmentally conscious objective within its industry sector. This Award signifies the company's identification of a unique and revolutionary solution with significant environmental benefits, while presenting tremendous market potential simultaneously. Moreover, the Award also signifies that the company's overall business strategy is sound and poised for success.

## Research Methodology

Technological excellence, focused on environmental priorities and long-term sustainability, is assessed regularly through continuous monitoring amongst market participants within specific industry sectors. Frost & Sullivan's analyst teams perform extensive interviews with companies within specific industries to evaluate their technologies, products and business strategies. In addition, research within that market space is performed to benchmark the Award recipient's technology against others. Also considered are elements such as strategic alliances, expected time to market, environmental soundness, long-term green strategies, and management advocacy behind the success of the technology.

## Measurement Criteria

Specific measurement criteria used to determine the final Award recipient are as follows:

### Technology Profile

- Technological platform characterized by long-term sustainability
- Ability to optimize resource usage
- Adaptability and responsiveness of the technology to address changing environmental needs and priorities

### Business Commitment

- Entrepreneurial dexterity in incorporating conservation into the business concept
- Development of technological solutions to address concerns regarding climate change

- Industry's acknowledgement of the green initiative in question, by way of financial support, strategic support, and recognition as a pioneering venture

#### Environmental Accountability

- Demonstration of obligatory responsibility in reducing environmental burden as part of the solution (e.g. cradle to grave solution)
- Inherent features that enhances adoption/participation rate
- Creation of collective accountability towards reducing the impact of climate change, dependency on finite resources and ecological footprint.

#### **About Frost & Sullivan Green Excellence Awards**

Instituted as an integral part of the Environment & Building Technologies Practice of Frost & Sullivan, Green Excellence Awards are presented to companies that have excelled in green product and technology innovation, and service achievements. These Awards recognize groundbreaking ideation and innovation across a multitude of disciplines that originated from a firm sense of environmental responsibility. Recipient companies are committed to a continuous focus on reducing the dependency on finite resources, from concept to commercialization. Their efforts demonstrate a resolve to reduce the impact of climate change and overall ecological footprint.

Frost & Sullivan Best Practices Awards recognize companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service, and strategic product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis, and extensive secondary research in order to identify best practices in the industry.

#### **About Frost & Sullivan**

Frost & Sullivan, the Growth Consulting Company, partners with clients to accelerate their growth. The company's Growth Partnership Services, Growth Consulting and Career Best Practices empower clients to create a growth focused culture that generates, evaluates and implements effective growth strategies. Frost & Sullivan employs over 45 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 30 offices on six continents. For more information about Frost & Sullivan's Growth Partnerships, visit <http://www.frost.com>.  
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