

2000

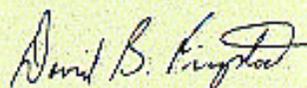
FROST & SULLIVAN

MARKET ENGINEERING PRODUCT INNOVATION AWARD

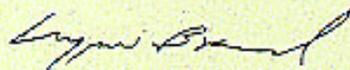
Presented to

VARTA GERAETEBATTERIE GMBH

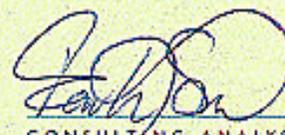
For: for developing a new product line of NiMH batteries that differ from existing cylindrical, prismatic and button shapes.



CHAIRMAN



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CONSULTING ANALYST

Frost & Sullivan's Market Engineering Awards are based on Frost & Sullivan's Market Engineering consulting experience in 1999. Winners are selected from an in-depth analysis of the market competitors and interviews with those companies that make up the industry. These awards are given to those companies that have distinguished themselves with their 1999 performance.

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Ellwangen, 18 April 2000

## **Varta USA Receives 'Product Innovation Award'**

**VARTA Batteries, Inc. receives the Frost & Sullivan Market Engineering Award 1999 for nickel-metal-hydride batteries**

The Frost & Sullivan Market Engineering Award for innovative products is awarded every year to one company that has "demonstrated exceptional performance in the development of new products and technologies", according to the announcement of the US panel of judges. It continues - "The winning company has proven its innovative abilities with the introduction of a wide range of new product developments and technologies."

VARTA Batteries Inc. received the 1999 Product Innovation Award for the US nickel-metal-hydride (NiMH) cells market and the V 450 HR micro (AAA-sized) battery. In 1999, Varta developed a new range of NiMH battery products with a significant difference to conventional cylindrical, prismatic and other types of button cells. The start of 2000 saw their launch onto the market. "Even the shape of these new battery types is new," says Frost & Sullivan's Research / Industry Manager, Shekar Gopalan. After carefully-planned research of the growing market for portable equipment, Varta developed a compact, lens-

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shaped battery with dimensions of 34 mm x 24 mm and a typical capacity of 460 mAH, which supplies a high current.

### **Flat, powerful and rechargeable**

The height of the new cell shape is a mere five millimeters. In recognition of the trend towards smaller and thinner equipment models, and the associated demand for suitable energy sources, the shape of Varta's new battery has been targeted specifically at the markets for mobile and cordless telephones, organizers and palmtops, security systems and other portable equipment. "As far as product innovation is concerned, Varta has well and truly earned this award," states Gopalan.

Of particular note were the new product's significance in this branch of industry, its competitive advantage in this branch, product innovation in the form of new technologies, market acceptance, new valuable product features for customers and the number of competitors with one or more similar products.



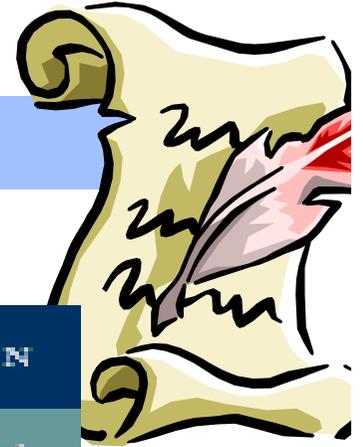
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<http://www.varta.com/press>

## VBI - Micro Batteries Sales 2000

### PRODUCT INNOVATION AWARD 1999



FROST & SULLIVAN

Market Engineering Award Recipient

2000

#### ➤ Award description

➤ The Frost & Sullivan Market Engineering Award for Product Innovation is presented each year to the company that has demonstrated excellence in new products and technologies within their industry. The recipient company has shown innovation by launching a broad line of emerging products and technologies.

#### ➤ Research Methodology

➤ To choose a recipient of this award, the analyst team tracks all new product launches, R&D spending, products in development, and new product features and modifications. This is accomplished through interviews with all the market participants, and extensive secondary and technology research. All new product launches and new products in development in each company are compared and evaluated based on degree of innovation and customer satisfaction. Companies are then ranked by number of new product launches and new products in development.

## VBI - Micro Batteries Sales 2000

### PRODUCT INNOVATION AWARD 1999

FROST & SULLIVAN

Market Engineering Award Recipient

2000

- ➔ Measurement Criteria
- ➔ In addition to the methodology describe above, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this award has excelled based on one or more of the following criteria:
  - ➔ Significance of new product(s) in their industry
  - ➔ Competitive advantage of new product(s) in their industry
  - ➔ Product innovation in terms of unique or revolutionary technology
  - ➔ Product acceptance in the marketplace
  - ➔ New product value-added services provided to customers
  - ➔ Number of competitors with similar product(s).

## VBI - Micro Batteries Sales 2000

### PRODUCT INNOVATION AWARD

1999

F R O S T S U L L I V A N

Market Engineering Award Recipient

2000

- Varta Batteries is awarded the 1999 Product Innovation Award for the U.S. Nickel battery market. In 1999, the company developed a new product line of NiMH batteries that differed from existing cylindrical, prismatic, and button shapes, and managed to introduce this line in early 2000. The shape of this new battery is innovation within itself. Conducting thorough research of emerging portable application markets, Varta has developed an oval-shaped cell that is slim with physical dimensions of 34 mm x 24 mm, has a typical capacity of 460 mAh, and provides high current. The overall height of this new shape is less than five millimeters thick. Realizing the growing movement towards smaller and thinner application devices and the requirement for accommodating energy sources, Varta designed this shape to target cellular and cordless phones, personal computer companions (PCCs), security systems, and other portable devices. **Varta Batteries stands out in in terms of product innovation.**