

## **Hitachi to Reconstruct its Semiconductor Business**

**Tokyo, Japan, October 19, 2001** --- Hitachi, Ltd. (TSE:6501/NYSE:HIT) today announced that, with rapid changes in the semiconductor market leading to a worsening of its semiconductor business results, the Company is implementing emergency management measures aimed at bringing about an early improvement in the results of its semiconductor operations. There will be a focus on streamlining the management resources of the semiconductor business while vigorously implementing measures for the future and carrying out extensive reforms of how the business is managed.

First, there will be a transition from managing the business as a general manufacturer of semiconductors, to managing it as a group of businesses that each specialize in specific core products.

Second, a business system will be constructed that makes profits less susceptible to market conditions. This will mean focusing on a business portfolio that is not readily affected by fluctuations in market conditions, and changing to a structure that enables fixed costs to be cut and that, during business slowdowns, enables costs to be flexibly reduced by changing fixed costs to variable costs.

Hitachi is implementing these reforms with the aim of achieving an early improvement in results that will move the semiconductor business into the black in fiscal 2002, ending March 2003.

## **[1]Selectivity and concentration in the semiconductor business**

Hitachi will concentrate resources where it has strengths and the markets are large, or in products and applications that have high growth potential. The business portfolio will be comprised of an application-specific business segment, and a commodity-product business segment. Hitachi will select and concentrate such a product and an application that will be achieved a top-three ranking in the worldwide marketplace.

### **1.Application-specific business**

In the application-specific business, the focus applications are mobile and network systems, digital consumer products and car information systems. Hitachi provides system solutions and application-specific products to meet the needs of the leading enterprises.

#### **(1)Focusing products**

Focusing products will be placed below. To expand sales and profits of each of these products, young leaders will organize special projects that encompass sales, development and manufacturing.

##### **a) Expanding sales of F-ZTAT™ microcontrollers**

Resources will be concentrated to expand sales and profits of F-ZTAT microcontrollers. The F-ZTAT is microcontrollers built-in flash memory.

Hitachi will concentrate on developing F-ZTAT products of H8 series in the priority applications of optical disk products, PC peripheral products, network systems, car accessories and home appliances. Hitachi will concentrate on developing SuperH™ series F-ZTAT products in the priority sectors of car engine power trains, digital consumer products and industrial equipment. Along with this, the development of products based on 0.18 μ m process line and smaller will be accelerated. The number of product marketing personnel will be increased. Project teams will be organized for North America, Europe, Asia and Japan to enlarge market share on a worldwide market.

##### **b) Strengthening development of application processors**

Hitachi is strengthening development of the S-MAP(SuperH Mobile Application Processor), with the aim of establishing it as a de facto standard. For car information systems and digital consumer products, Hitachi will develop application processors based on the SuperH family, and provide corresponding software-based systems solutions

##### **c) Focusing on memories for non-commodity products**

Development resources are being shifted from multi-purpose memories to non-commodity memories. Hitachi will focus on Stacked-CSP products and MultiMediaCard™ (MMC) products with security features. These products will be used mainly in next-generation mobile phones with multimedia functions.

## (2) Manufacturing Organizations

On the manufacturing side, the latest process technology will be used to achieve volume production with high performance, short turnaround times and lower costs at Treceni Technologies, Inc. (TTI), (Hitachinaka city, Ibaraki Prefecture), the N2 line in Naka (Hitachinaka city, Ibaraki Prefecture) and Hitachi Nippon Steel Semiconductor Singapore Pte. Ltd. (HNS) (Singapore).

### a) Expanding the product lineup at TTI

With the world's first volume production operation to use 300 mm wafers, TTI is a leading-edge facility with sub-0.18- $\mu\text{m}$  line process technology. From October 2001, production of systems LSIs, SuperH microprocessors, F-ZTAT microcontrollers, flash memories, SRAMs and other products will be started manufacturing at TTI.

### b) Changing product lineup at HNS

In addition to providing Elpida Memory, Inc. with DRAMs, HNS has started trial production of non-commodity products such as SRAMs, flash memories, F-ZTAT microcontrollers, SuperH microprocessors, with volume production scheduled to start manufacturing in 1<sup>st</sup> half of fiscal 2002.

DRAM production at HNS will be reduced to match the demand. The number of employees has been reduced from about 1300 at the end of March 2001, to about 1,000, and further cutbacks in the scale of operations will be accompanied by further reduction in the size of the workforce.

## 2. Commodity-product business

Product groups to concentrate resources on will be selected from among multi-purpose semiconductors (discretes, linear-ICs, diodes, etc) and multi-purpose microprocessors. The lineups of the selected product groups will be strengthened and improved to increase the range of market coverage. Hitachi will establish new company including subsidiaries, it will be established and consolidated to integrate design and manufacturing of the products concerned, in order to strengthen development and reduce costs.

### (1) Establishment of new company for multi-purpose semiconductors

A part of the Multi-Purpose Semiconductor Group and Hitachi Tohbu Semiconductor, Ltd. (Takasaki city, Gumma Prefecture) will be consolidated to establish a new company that integrates the development, design, manufacturing and sales of multi-purpose semiconductors. The new company is scheduled to be established in October 2002. The integration of everything from development to sales will streamline the decision-making process, enhance product developmental capabilities for customers. The products that will be handled by the new company include analog ICs, standard linears, high power amplifiers, standard logics, and transistors. The sales target for fiscal 2004 is about 200 billion yen, compared to sales of about 160 billion yen in fiscal 2000.

### (2) Strengthening integration in the multi-purpose microcomputers business

On October 1, an integrated organization for the design and manufacture of multi-purpose microcomputers was established by consolidated the multi-purpose microcomputer business and Hitachi Hokkai Semiconductor, Ltd. (Kameda, Hokkaido). This is expected to produce sales of about 160 billion yen in fiscal 2004, compared to about 130 billion yen in fiscal 2000.

## **[2]Reorganizing manufacturing operations**

Measures to streamline semiconductor business operations and improve efficiency at manufacturing operations are being implemented to reduce fixed costs and optimize production.

### **1.Consolidation and suspension of front-end manufacturing processing**

With respect to front-end operations, to optimize utilization of TTI, Naka N2 and HNS lines, production on older lines with low utilization rates is being transferred to newer lines. As a result, by August 2002, the number of active lines will be reduced from 19 to 12. Details of these moves are described below.

- (1) Kofu operation's K6 line used to manufacture microprocessors for IC cards was temporarily suspended in July 2001, and additionally one more line will be transferred to another line in the same area by August 2002. The line concerned is used for production of LCD drivers.
- (2) At the Takasaki operation, production on one line will be transferred to another line in the same area by December 2001. The line concerned is used for production of RF ICs and logic ICs for consumer products.
- (3) At the Kodaira operation, a prototype manufacturing line was closed in September 2001.
- (4) At Hitachi Hokkai Semiconductor, production of one production line at the Tsugaru operation, and of another line at the Chitose operation, will each be transferred to another of the company's lines, by December 2001 and March 2002, respectively. H8 microprocessors are among products the lines are used to produce.
- (5) Naka operation's N1 line will be transferred to lines at Kofu and elsewhere, by March 2002. The line is used in the production of H8 microprocessors and ASICs.

### **2.Reduction of Back-end manufacturing processing bases**

Reorganization and consolidation of back-end production bases will reduce the number of bases from 13 to 8 by September 2002.

Along with this consolidation, operations will be shifted to back-end manufacturing processing bases overseas. Specifically, back-end processing of memory products, and of power transistors will be transferred to Hitachi Semiconductor ( Suzhou ) Co.,Ltd. (HSSC) and Hitachi Semiconductor (Malaysia) (HISEM). This will enable the merits of scale to be used to reduce costs. A design center will be established within HISEM to develop new linear products matched to the needs of Asian markets, and to reduce costs. Details of these moves are described below.

- (1) At Haguro Electronics Co., Ltd., the microprocessor back-end manufacturing processing base at the Kubota works will be transferred to the area of the parent company field, Hitachi Yonezawa Electronics, by March 2003.
- (2) At Akita Electronics Co., Ltd., the memory back-end manufacturing processing base at the Yuwa works will be transferred to Hitachi Yonezawa Electronics Co., Ltd. by March 2002. Also, the manufacture of semiconductor products at the Tenno works for customers outside Hitachi will be transferred to the Yuwa works, and the Tenno works will be closed. Akita Electronics, also, on April 1, 2002, will be reorganized to an engineering company and a manufacturing subsidiary that produces semiconductors for outside customers.

(3) The back-end manufacturing processing base at the Tsugaru facility of Hitachi Hi Components, Ltd. will be transferred to the head-office works, by March 2002. The products concerned are signal transistors.

(4) At the head-office works of Hitachi Tokyo Electronics Co., Ltd., part of the back-end manufacturing of LCD driver TCP package products will be transferred to Kofu to establish, by September 2002, a manufacturing organization that integrates front-end and back-end operations for LCD drivers. Also, back-end manufacturing processing base of multi-purpose microprocessors will be transferred to Hitachi Hokkai Semiconductor's Hakodate works and Hitachi Yonezawa by March 2002.

Following the consolidation moves, the head-office works will be expanded as a back-end mother-fab.

(5) At Kaohsiung Hitachi Electronics Co., Ltd., back-end processing of power transistors will be transferred to HISEM by September 2002. Kaohsiung Hitachi Electronics will continue to produce power transistors for outside customers and LCD products.

### **[3]Reducing fixed costs**

Through the above measures, from the end of fiscal 2000 to the end of fiscal 2001, the number of employees in Japan will be reduced by approximately 3,100 on a consolidated basis, a figure that includes employees moved to a different business group. Taken together with the reduction in depreciation costs and the like resulting from cutbacks in plant and equipment investment and the consolidation of production bases, in fiscal 2001 this will result in a considerable reduction in fixed costs of 25% or more.

SuperH is a trademark of Hitachi,Ltd.

F-ZTAT is a trademark of Hitachi,Ltd.

MultiMediaCard is a trademark of infineon Technologies AG of Germany

### **Outline of New Multi-Purpose semiconductor company**

- ( Company name : Pending decision )
- ( 1 ) Head Office : Gunma Prefecture, Japan
- ( 2 ) President : Pending decision
- ( 3 ) Capital : Pending decision
- ( 4 ) Sales : 200 Billion (The fiscal year ending March 31 ,2004 ) ( Provisional )
- ( 5 ) Employees : Pending decision
- ( 6 ) Business : Development, design, manufacture and sales of multi-purpose semiconductors

### **Outline of consolidated companies**

#### **1.Hitachi Hokkai Semiconductor, Ltd.**

- ( 1 ) Head Office : Hokkaido,Japan
- ( 2 ) President : Sadao Yoneyama
- ( 3 ) Capital : 2.4 billion yen (100% owned by Hitachi ,Ltd. )
- ( 4 ) Sales : about 100 billion yen ( The fiscal year ending March 31 ,2001 )
- ( 5 ) Employees : 2,300 ( as of March 31, 2001 )
- ( 6 ) Business : Development, design, manufacture and sales of semiconductors and semiconductor application products

#### **2.Akita Electronics Co., Ltd.**

- ( 1 ) Head Office : Akita Prefecture, Japan
- ( 2 ) President : Shunji Shimada
- ( 3 ) Capital : 4.8 billion yen ( 100% owned by Hitachi ,Ltd.)
- ( 4 ) Sales : 66 billion yen ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 1,000 ( as of March 31, 2001 )
- ( 6 ) Business : Semiconductor back-end processing , manufacture and sales of related software

#### **3.Hitachi Yonezawa Electronics Co., Ltd.**

- ( 1 ) Head Office : Yamagata Prefecture, Japan
- ( 2 ) President : Hitoshi Horimuki
- ( 3 ) Capital : 3.3 billion yen ( 100% owned by Hitachi ,Ltd. )
- ( 4 ) Sales : 53 billion yen ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 700 ( as of March 31, 2001 )
- ( 6 ) Business : Semiconductor back-end processing and development, design, manufacture and sales of system board

#### 4.Haguro Electronics Co., Ltd.

- ( 1 ) Head Office : Yamagata Prefecture, Japan
- ( 2 ) President : Chihiro Mitsui
- ( 3 ) Capital : 90 million yen( 100% owned by Hitachi Yonezawa Electronics Co, Ltd. )
- ( 4 ) Sales : 11 billion yen ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 270 ( as of March 31, 2001 )
- ( 6 ) Business : Semiconductor back-end processing ,manufacture of electronics application products

#### 5.Hitachi Tohbu Semiconductor, Ltd.

- ( 1 ) Head Office : Gunma Prefecture, Japan
- ( 2 ) President : Natsuki Kogiso
- ( 3 ) Capital : 12.8 billion yen ( 100% owned by Hitachi , Ltd. )
- ( 4 ) Sales : 130.5 billion yen ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 1,450 ( as of March 31, 2001 )
- ( 6 ) Business : Development, design, manufacture and sales of multi-purpose semiconductors

#### 6.Hitachi Hi Comonents, Ltd.

- ( 1 ) Head Office : Aomori Prefecture, Japan
- ( 2 ) President : Masataka Fukuyama
- ( 3 ) Capital : 60 million yen( 100% owned by Hitachi Tohbu Semiconductor, Ltd. )
- ( 4 ) Sales : 21.7 billion yen ( ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 850 ( as of March 31, 2001 )
- ( 6 ) Business : Manufacture of semiconductor(signal transistor , modules)

#### 7.Hitachi Tokyo Electronics Co., Ltd.

- ( 1 ) Head Office : Tokyo, Japan
- ( 2 ) President : Yasuki Kuki
- ( 3 ) Capital : 6 billion yen ( 100% owned by Hitachi , Ltd. )
- ( 4 ) Sales : 64.9 billion yen ( The fiscal year ending March 31, 2001 )
- ( 5 ) Employees : 1,190 ( as of March 31, 2001 )
- ( 6 ) Business : Manufactue and sales of semiconductor devices and semiconductor equipment

#### 8.Treenti technologies,Inc.

- ( 1 ) Head Office : Ibaraki Prefecture, Japan
- ( 2 ) President : Toshio Nohara
- ( 3 ) Capital : 30billion yen( Hitachi 60%、 United Microelectronics Corporation40%
- ( 4 ) Employees : about 400 ( as of March 31, 2001)
- ( 5 ) Business : Manufacture and semiconductor products using 300 mm wafers, and any incidental business to this

9.Hitachi Nippon Steel Semiconductor Singapore Pte. Ltd.

- ( 1 ) Head Office : Tampines ,Singapore
- ( 2 ) President : Kimihiro Ogawa
- ( 3 ) Capital : 29.48 billion yen ( 44 singapore \$)  
( Hitachi 35%、 Nippon Steel 35%、  
Singapore EDB Investments Pte. Ltd. 30% )
- ( 4 ) Employees : 1,262 ( as of March 31, 2001 )
- ( 5 ) Business : The manufacture of Memory

10.Hitachi Semiconductor ( Suzhou ) Co.,Ltd.

- ( 1 ) Head Office : Suzhou, China
- ( 2 ) President : Yasuo Sugata
- ( 3 ) Capital : 29.962 million US \$  
( Hitachi 81%、 Singapore EDB Investments Pte. Ltd.19% )
- ( 4 ) Employees : about 360 ( as of March 31, 2001 )
- ( 5 ) Business : The design ,manufacture, sales provide related service

11.Hitachi Semiconductor (Malaysia) Sdn. Bhd..

- ( 1 ) Head Office : Penang, Malasia
- ( 2 ) President : Hitoshi Ishimori
- ( 3 ) Capital : 84 million RM  
( Hitachi 90%、 Malaysia Permo dalam Nasional Berhad 10% )
- ( 4 ) Employees : 2,626 ( as of March 31, 2001 )
- ( 5 ) Business : Manufacture of semiconductors

12.Kaohsiung Hitachi Electronics Co., Ltd.

- ( 1 ) Head Office : Takao, Taiwan
- ( 2 ) President : Masazumi Hatoori
- ( 3 ) Capital : 336 billion NT ( 100% owned by Hitachi , Ltd. )
- ( 4 ) Employees : about 1,700 ( as of March 31, 2001 )
- ( 5 ) Business : Manufacture and Sales of liquid crystal display devices, electron guns  
for color cathode ray tubes and semiconductors

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