

# New Products & Topics

## Environment

### 3rd World Water Forum (WWF-3, March 16-23, 2003) and Its CEO Panel

**Shimadzu participates in the working group of two main themes, AWARENESS (education) and IWRM (integrated water resource management) regarding water environmental issues in the Taskforce Committee.**

#### About World Water Forum

The World Water Forum is an international conference conceived by the World Water Council (WWC) – an international think tank mainly comprised of specialists on global water issues, academic societies and international organizations. The first forum was held in Marrakech, Morocco with the following in Hague, Holland. The latter was an impressive affair with 5,700 specialists in addition to people from various academic societies and international organizations with representatives of 156 countries.

#### WWF-3 to be Held in Kyoto Area

Next year, WWF-3 will be held in Kyoto to provide a stage for exchanging opinions to help convert the "World Water Vision" from a vision into actual action and offer a debating chamber for discussing concrete actions needed to resolve the issues at hand. Shimadzu's

president, Hidetoshi Yajima, as a member of the CEO Panel, which is comprised of the CEOs from 14 multinational corporations, will be involved in discussions to forge a joint statement for consideration at the ministerial conference from private industrial sector to be held as part of the forum. The four main themes to be discussed at CEO panel are: integrated water resource management, sustainable water use in agriculture, fund procurement for establishing water infrastructures in developing countries, and environmental education to help preserve water resources. It is the responsibility of the Taskforce to formulate an integrated joint statement based on these four themes. Of the various discussions regarding these themes, Shimadzu will be most active in the area of environmental education (AWARENESS) and integrated water resource management (IWRM).

*Shimadzu President & CEO Yajima appointed as a CEO panel member*



The London Taskforce Meeting – attended by ten European and U.S. multinational companies (including Heineken, Unilever and Thames Water) and four Japanese companies (Toray, Ebara, Oji Paper and Shimadzu) - provided a platform for members to share their common understanding and put forward planning ideas for the third forum. Shimadzu Techno-Research and Shimadzu Rika Instrument will take part in our further contribution to the planning of globally accepted educational tools.

**Reported by Teruyoshi Amano, Environmental Management Dept. of Shimadzu Corporation.**



*Shimadzu Techno-Research head office*

## Celebration

### Leading Environmental Analysis Company, Shimadzu Techno-Research, Celebrates Its Longstanding Achievements

As a fully owned Shimadzu subsidiary, Shimadzu Techno-Research Inc. was formed to conduct contract analysis of environmental substances in 1972. As the environmental monitoring field subsequently expanded, the company grew to lead the Japanese environmental monitoring industry, particularly



*Analysis data processing room*

in the analysis of dioxins. Currently, it boasts of 140 employees and annual sales of 3.7 billion yen. In celebration of its 30th anniversary in April 2002, the company compiled its 30 years of history in a 154-page commemorative volume.

## New Product

The SONIALVISION digital table, with digital X-ray imaging and multi-function X-ray diagnostic system, meets diverse clinical needs



Fig. 1

### Digital, Linear Tomographic Imaging Achieved

#### Sophisticated, multi-axis mechanical control technology

At a glance, the SONIALVISION resembles any previous R/F table but the totally new mechanism achieves previously unimaginable movements. The column supporting the X-ray tube is unconnected to the I.I. and the other imaging unit. Three-axis simultaneous control permits independent control of the X-ray tube and I.I. positions. It also provides independent control of the X-ray tube rotation angle. In addition to synchronized sliding of the X-ray tube

and I.I. in the same direction, this system allows positioning of the X-ray tube and I.I. on opposing sides of the table at the head and leg ends to take inclined tomographic images with a constant irradiation field. The extremely precise control of these movements achieves high-speed movement of the heavy X-ray tube and I.I., and offers accurate imaging capacity superior to that of mechanical linkages.

The parallel plane system maintains the X-ray tube path parallel to the cutting plane, even when the X-ray tube swing angle changes, which ensures sharp tomographic images with a constant

magnification at the cutting plane.

This system achieves a speed of 40°/1.5s at four plane angles (8°, 20°, 30°, and 40°), which is a specification worthy of a dedicated tomographic imaging device. The table tilting function allows tomographic imaging of the patient in a standing posture. (Fig. 1)

#### High-speed digital image processing technology

Digital tomographic imaging involves taking digital images while changing the X-ray incidence angle at the cutting plane and using high-speed image processing to create a tomographic image that is displayed on the monitor.

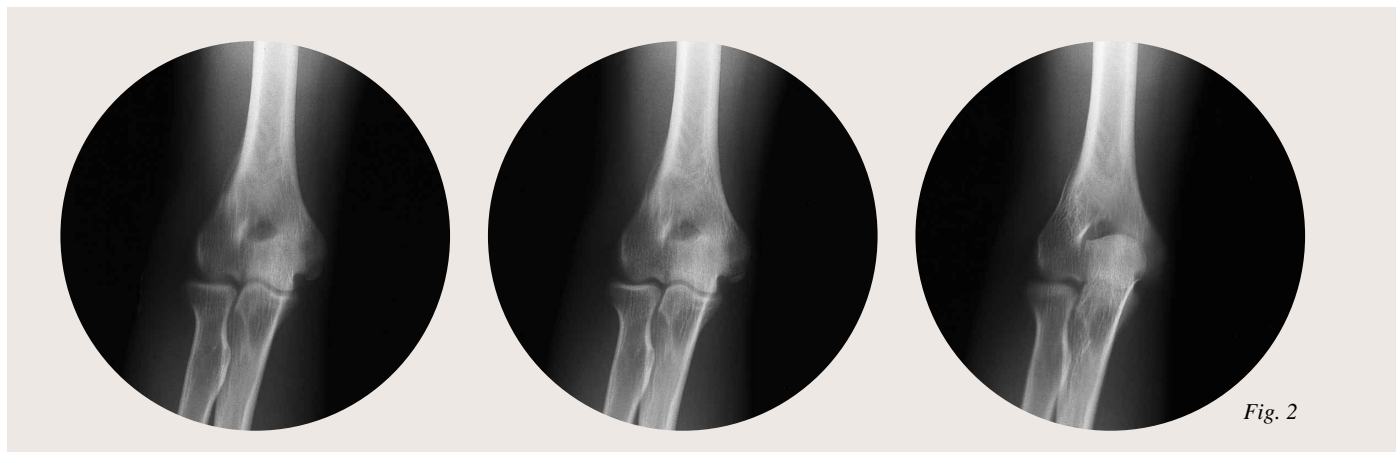


Fig. 2

During tomographic imaging, the DR high-speed image-processing functions create accurate, real-time images from the huge number of images taken with slight changes to the X-ray angle of incidence. (Fig. 2)

Naturally, the SONIALVISION is also compatible with cassette CR and film tomographic imaging (up to 14" x 17").

### Powerful Emergency Examination Imaging Features

The SONIALVISION offers powerful features for the initial imaging to determine the condition of emergency patients transported by stretcher.

#### Fully flat tabletop with elevation function

The table features an elevation function to adjust the tabletop to the same height as the stretcher to facilitate transfer of the patient from the stretcher to the table. The world's first completely flat carbon tabletop completely eliminates all surface irregularities to ensure smooth patient transfer. Good access is provided around the table to facilitate patient care.

#### Stretcher imaging

The versatile SONIALVISION X-ray tube support mechanism allows the table to be positioned vertically with the X-ray tube pointing to the floor, such that X rays can be directed to a patient on a stretcher.

The X-ray tube orientation is easily con-

trolled with a switch next to the X-ray tube and a slide switch in the same position rapidly adjusts the vertical height, providing efficient operation for emergency patients battling against time.

### Comprehensive Functions Assist Both Orthopedic and General Imaging

#### 40° incidence angle is effective for orthopedic images

Orthopedic imaging is predominantly the imaging of joints and bones and involves X-ray irradiation from a variety of orientations for many imaging techniques on all parts of the body. This wide range of orientations is easy to achieve with a general-purpose X-ray system but the mechanical limitations of a system with an I.I. R/F mechanism restrict the X-ray angle of incidence to about 30°.

The independent X-ray tube and I.I. support mechanisms of the SONIALVISION achieve a deep, 40° X-ray incidence angle at both the head and leg ends. (Fig. 3)

The wider incidence angles permit pelvic imaging and the imaging of patients complaining of joint pains without forcing the patient into uncomfortable postures.

#### Cassette imaging

This DR system also handles cassettes to offer the commonly used CR imaging. The system can handle cassette sizes up to 14" x 17". The cassette size is

automatically recognized by a sensor.

#### Low-magnification imaging at SID=1.5m

The column supporting the X-ray tube can be extended to the SID=1.5m position to obtain high-quality X-ray images with little deterioration in image quality due to image magnification.

#### Using the X-ray tube with standing posture type stand

The X-ray tube can be reversed 180° with respect to the tabletop while the table is in the vertical position, allowing application of the SONIALVISION X-ray tube with a wall-mounted stand in the examination room.

Enhanced general radiographic imaging functions from those available previously, including the world-first 4-field phototimer function with independent pickup areas for the abdomen and thorax, make this the SONIALVISION digital table fully applicable to general imaging.

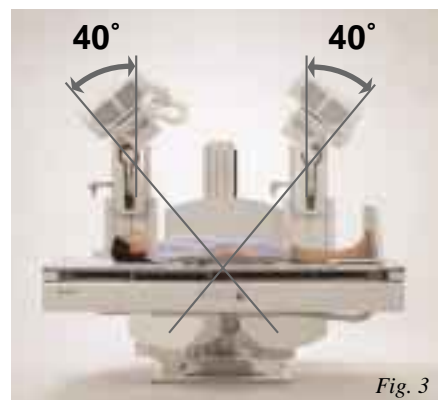


Fig. 3

Contributed by Tatsuhiro Mori, Medical Systems Div. of Shimadzu Corporation.