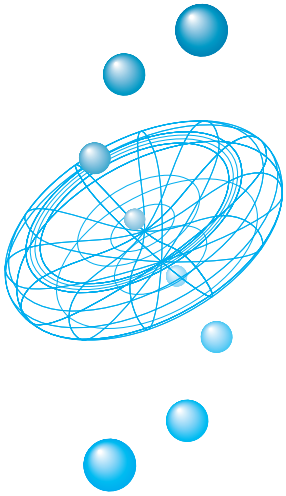
REVIEW ARTICLE



SERIES
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How the IT Revolution is affecting trends in Clinical Testing

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Key Words

Information Technology (IT), Networking Diagnostics

INTRODUCTION

The last decade of the 20th century has seen unprecedented advances in information technology. New tools have transformed the way in which information is generated, provided and used. Concepts of both time and space have been revolutionized by the realization of boundless information networking tools such as the Internet. As we have entered the new millennium, one of the greatest challenges will be the ability to successfully utilize the developing technologies to realize, for the information end user, the added values expected from IT. By offering the solutions to provide the correct information at the right time and at the right location, the possibilities of the new millennium are indeed limitless.

CHALLENGES

No where are the potential benefits of information technology more important than in the modern day clinical laboratory. The benefits of realizing the insignificance of physical location of hardware or people interfacing with an Intranet, would offer real-time data consolidation and open information access. Within the laboratory workflow, the way both clinical data and technical staff are used could be further optimized to achieve considerable output gains. The efficient utilization of increasing volumes of clinical data to provide ever more accurate and speedy diagnostic support information would also ultimately improve the quality of service for the patient. Sysmex has combined it's considerable knowledge on laboratory workflow needs, while embracing modern technologies and trends to address these challenges which we introduce as our [Networking Diagnostics] concept.

NETWORKING DIAGNOSTICS

The new XE-2100 fully automated hematology analyzer combines both flexible networking/Ethernet capabilities with sophisticated analysis performance, including support of graphical data, to offer an unrivaled instrument in terms of accuracy, TAT (Turn Around Time) and CPP (Cost Per Procedure).
Utilizing new analyzer networking capabilities and realizing modern customer needs for improved service value, Sysmex has developed the SNCS (Sysmex Network Communication System). SNCS provides direct online QC and online instrument support through remote connection to our central support headquarters. Substantial reductions in instrument downtime and improved quality control levels have been realized.
Along with improving accuracy and availability of clinical data the requirement for data management and processing of data to provide clinical support information has been achieved through our SIS (Sysmex Information System). A flexible and scaleable laboratory information system combining network configurability with sophisticated functionality and testing control features.

Technology available today allow us to fulfil more of the needs of the modern Clinical Laboratory by improving the use of all information available, including graphical and image data. LAFIA (Laboratory Image Filing System) and HEG-50 (Automated Differential Counter) add the possibility of further consolidation of test results from SIS/HOST with digitally captured cell image data. Via comment input, atlas referencing etc. the complete Information required for an accurate diagnosis is made readily available. In addition by incorporating Web server technologies, full information availability is extended to intranet/internet access. Through support of Internet online discussions with experts situated remotely, real-time information exchange and reference, boundless information access is realized.

FUTURE

Sysmex's vision of the Networking Diagnostics Concept and it's implementation commitment has allowed both consolidation of all required and relevant information, while making this information available not only within the clinical laboratory but throughout the entire medical network.
The future challenges are the continued and improved use of clinical information - realizing greater value - with increased data warehousing/data mining functionality. Thus, an advanced diagnostic decision support system will be made available.