

STAR

SYSTEMS FOR TELECOMMUNICATIONS: ANALYSIS & RESEARCH

**AN INFORMATION SERVICE
DEFINING CORE TRANSMISSION
TECHNOLOGIES FOR THE NORTH
AMERICAN TELECOMMUNICATIONS
NETWORK**

- **PHOTONIC NETWORKS &
WAVELENGTH DIVISION
MULTIPLEXING (WDM)**
- **SONET, DIGITAL CROSS-CONNECTS**
- **ACCESS SYSTEMS**
- **PROFILES OF KEY VENDORS AND
OPERATORS**
- **FORECASTS**
- **STAR VI PRIVATE CONFERENCE**

P R O G R A M P R O S P E C T U S

ryan · hankin · kent, inc.

consulting and research in communications services and technologies

iCAST
series



STAR VI is a multi-client research program that offers detailed and timely analysis of advanced transport and access technologies in the North American Telecommunications market. It addresses how transmission networks are changing to meet evolutions in the technical and regulatory landscape. This program is designed to meet the strategic planning needs of senior professionals whose responsibility it is to profitably build or maintain advanced telecommunications networks, or to manufacture the equipment enabling these networks.

RHK'S STAR VI PROGRAM ANSWERS CRITICAL CONCERNS SUCH AS:

How can system operators most effectively deploy the new generations of photonic network technologies?

What is the near-term market for SONET systems and digital cross-connects? How will the advent of ATM network elements and photonic networks affect the role of these technologies?

What are the near-term roles for the key types of access system technologies? How will the emergence of competitive access carriers shape the market?

rhk has built a reputation for providing the industry's best detailed insights into the technologies, economics and competitive forces that determine which strategies will succeed in public network systems — and which will not — and what timeframes are involved.

For senior technical and business development professionals at telecommunications systems vendors, network operators, component manufacturers and investors, STAR VI:

- provides the benchmark for detailed industry tracking of telecom systems markets.
- offers insights into the roles of emerging systems technologies and network architectures.
- uses an extensive program of both primary and secondary research to develop market forecasts, market share data and analyses of competitive positions.

The seven volumes comprising STAR VI are organized into *three* distinct subject areas:

- Photonic Networks
- SONET and Digital Cross-connect Systems
- Access Systems

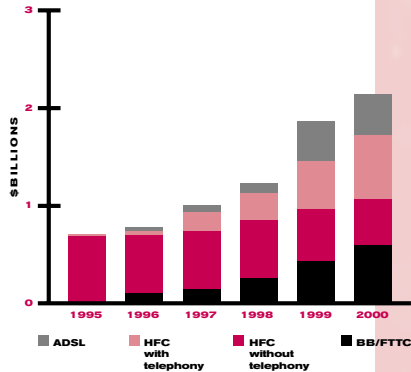
STAR VI, VOLUME 1 PHOTONIC NETWORKS

The emergence of optical amplifiers and of dense wavelength division multiplexing (WDM) systems heralds a new era in telecommunications infrastructures... one in which photonic network technologies will play a key role. This presents tremendous new opportunities — and threats — to the current way of doing business.

WHERE WILL DENSE WDM SYSTEMS FIND MAXIMUM VALUE? HOW WILL DIFFERENT OPERATORS DEPLOY THESE NEW TECHNOLOGIES? WHAT ARE THE ECONOMICS UNDERPINNING THE EMERGENCE OF PHOTONIC NETWORKS?

- Volume 1 Photonic Networks:**
- ▲ Technology analysis: dense WDM in IXC, LEC and CAP networks
 - ▲ Forecasts of opportunities for photonic networks
 - ▲ Vendor profiles
 - ▲ Operator profiles

TOTAL MARKET FOR BROADBAND ACCESS TECHNOLOGIES



STAR VI RESEARCH SUMMARY, BY VOLUME

VOLUME 1 PHOTONIC NETWORKS	VOLUMES 2, 3, 4 SONET AND DIGITAL CROSS-CONNECT SYSTEMS	VOLUMES 5, 6, 7 ACCESS SYSTEMS
<ul style="list-style-type: none"> ■ In-depth coverage of dense WDM and photonic cross-connects ■ Market forecasts, technology analysis, vendor and operator profiles 	<ul style="list-style-type: none"> ■ Continuous tracking of transport systems: SONET — from OC1 & 3 to OC192; digital cross-connects ■ Market forecasts, technology analysis, vendor and operator profiles and product matrices 	<ul style="list-style-type: none"> ■ Continuous tracking of wireline access systems: including ISDN, NGDLC, HFC, xDSL, FTTC ■ Market forecasts, technology analysis, vendor and operator profiles and product matrices
100 to 150 pages	150 to 250 pages per volume	150 to 250 pages per volume
CONFERENCE		INQUIRY SERVICE
<p>The STAR VI conference is held for the exclusive benefit of program participants. It is designed to provide attendees with a summary of key findings, updates of market forecasts, and advance notice of issues affecting the emerging market.</p> <p>Participating companies receive one complimentary seat and the right to purchase additional seats based on availability.</p>		<p>Participating companies are encouraged to contact rhk STAR program analysts for updates and further elaboration on the details covered in STAR VI. This allows program participants to further tailor the information to meet their specific needs.</p> <p>rhk analysts will be available for a limited number of customized client briefings, as well as custom consulting. (Billed separately.)</p>

RHK STAR VI: PROGRAM SUMMARY

The STAR VI multi-client research program provides detailed, timely analyses of core transmission technologies in the North American public switched telecommunications network. During the program year, STAR VI clients receive seven report volumes, an invitation to the STAR VI private client conference, and access to STAR research analysts for private consultation.

STAR VI: Core Transmission Technologies

- One in-depth volume on Photonic Networks
- Three volumes on Transport Systems — SONET and Digital Cross-connects: covering technologies and markets; detailed vendor profiles; operator profiles
- Three volumes on Access Systems: covering technologies and markets; detailed vendor profiles; operator profiles

STAR VI Private Conference

- Summary of STAR VI content
- Market forecast updates
- Outlook for critical issues affecting profitability and progress in the coming year
- Guest speakers
- Access to STAR analysts

STAR VI Analyst Inquiry Service

- Participants have access to the unique expertise of the STAR analyst team
- Analysts will confer with clients regarding specific questions on issues covered in STAR VI

Optional Extras:

- Customized on-site briefings
- Electronic delivery (reports on disk, CD-ROM, HTML)
- Customized research building on the STAR foundation



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- SONET and Digital Cross-connect Systems
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STAR VI, VOLUME 1 PHOTONIC NETWORKS

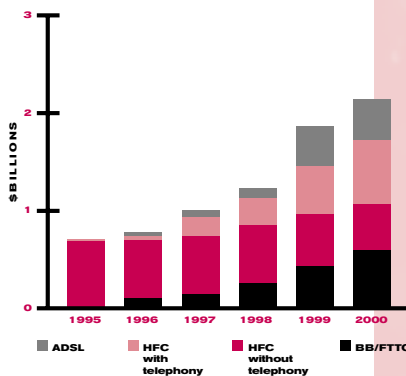
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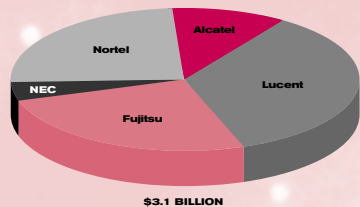
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- ▲ Operator profiles

TOTAL MARKET FOR BROADBAND ACCESS TECHNOLOGIES



1996 SONET MARKET SHARES



STAR VI, VOLUMES 2, 3 & 4 SONET AND DIGITAL CROSS-CONNECTS

The rapid growth in competition in telecommunications has created a surge in spending on SONET systems — but how long will this hold up?

TO WHAT EXTENT WILL SONET FUNCTIONALITY BE MERGED INTO ATM, FRAME RELAY OR EVEN IP NETWORK ELEMENTS? HOW WILL THE NETWORK OPERATORS' BUDGETS FOR TRANSPORT SYSTEMS CHANGE? WHICH VENDORS ENJOY THE BEST RELATIONSHIPS WITH WHICH OPERATORS?

Volume 2 Technologies and Markets:

- ▲ SONET and digital cross-connect evolution
- ▲ Their role in the world of ATM and photonic networks
- ▲ Forecasts of opportunities for SONET systems and digital cross-connects

Volume 3 Detailed Vendor Profiles:

- ▲ Corporate direction
- ▲ Product strategies
- ▲ Customer relationships
- ▲ Market shares
- ▲ Detailed product matrices for SONET systems and digital cross-connects

Volume 4 Operator Profiles:

- ▲ Corporate direction
- ▲ Deployment activities and the plans for these technologies
- ▲ Vendor relationships
- ▲ Forecasts of system spending

STAR VI, VOLUMES 5, 6 & 7 ACCESS SYSTEMS

As the number of competing access technologies continues to expand, the number of competitors in the deregulated local loop is growing in tandem.

WHAT DO CONSUMERS NEED AND HOW WILL THIS FUEL THE DEMAND FOR HIGH-BANDWIDTH ACCESS SYSTEMS? WHAT IMPACT WILL DEREGULATION HAVE ON SYSTEM DEMAND AND PRODUCT PERFORMANCE?

Volume 5 Technologies and Markets:

- ▲ Regulatory and competitive focus
- ▲ Analysis of wireline access systems and technologies — including xDSL, HFC, FTTH, ISDN, NGDLC
- ▲ Forecasts of opportunities for each market segment

Volume 6 Detailed Vendor Profiles:

- ▲ Corporate direction
- ▲ Product strategies
- ▲ Customer relationships
- ▲ Market shares
- ▲ Detailed product matrices

Volume 7 Operator Profiles:

- ▲ Corporate direction
- ▲ Deployment activities and plans for these technologies
- ▲ Vendor relationships
- ▲ Forecasts of system spending

ABOUT THE STAR SERIES

Origins: Since its launch in 1991, STAR has developed a reputation as a widely-respected source of thorough data and analyses on this critical, fast-changing and rapidly growing industry of core transmission technologies. It provides an essential level of support to your planning process in keeping your network, your system or component product line — or your investments in network technologies — at the best possible level of competitiveness.

Key differentiator: STAR is researched and prepared by experts from within the industry whose in-depth technical knowledge extends to the real-world operational and economic issues at stake.

Options include: On-site briefings; electronic delivery (reports on disk, CD-ROM, HTML); customized research — building on the STAR foundation of knowledge and expertise.

METHODOLOGY

The STAR VI analyses are based on an extensive program of expert original primary research — with technology vendors and carriers, among others. The expert STAR analyst team and our unique position in the market provides close interaction with all major players. Additionally, a full set of secondary data, prior rhk research and parallel research in related areas will be used to complete this complex program.

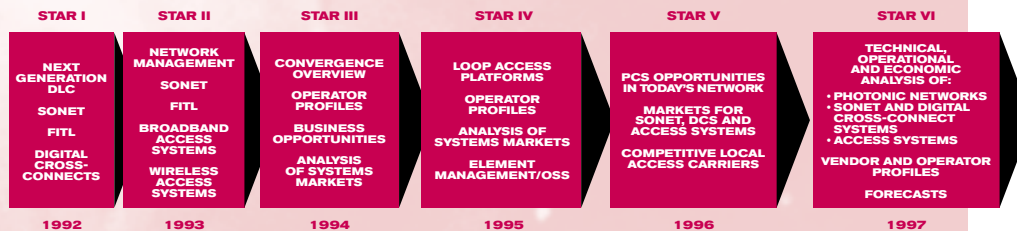
WHO SHOULD BUY STAR VI?

- Telecom systems vendors — current and new entrants
- Network operators: telcos, new carriers and cable operators
- IC developers, makers of fiber optic components
- Investors

WHY?

- Industry-leading tracking of telecom systems market growth
- Detailed profiles of vendors, operators
- Product matrices
- Roles of emerging systems technology
- Well-researched forecasts and market share data; competitive positioning
- Insights into evolution of infrastructures for established and emerging carriers

STAR VI IS BUILT ON A SIX-YEAR TRADITION OF DETAILED SYSTEMS RESEARCH



STAR VI DETAILED VENDOR PROFILES

- ADC Telecommunications
- Advanced Fibre Communications
- Alcatel Telecom
- AG Communications Systems
- Amati
- Bosch Telecom
- BroadBand Technologies
- Ciena
- Diamond Lane Communications
- DSC Communications
- E/O Networks
- Ericsson
- Fujitsu
- General Instrument Corp
- Lucent Technologies
- Motorola
- Netspeed
- NEC
- NexLevel Communications
- Nortel
- Orckit Communications
- PairGain Technologies
- Paradyne
- Performance Telecom Corp
- Philips Broadband Networks
- Pirelli
- Positron
- Pulsecom
- Reltec Corp
- Scientific-Atlanta
- Siemens Stromberg-Carlson
- Tadiran
- Telco Systems
- Tellabs
- Weslell
- West End Systems

STAR VI OPERATOR PROFILES

Major IXCs, LECs, CAPs, MSOs, Canadian operators, CLECs

“ AS AN RHK CUSTOMER — ALMOST SINCE ITS INCEPTION — I HAVE CONSISTENTLY BEEN PLEASED WITH THE FOCUS ON QUALITY IN ITS REPORTS. RHK IS WITHOUT PEERS IN PRODUCING ACCURATE, RELIABLE REPORTS FOR THE NORTH AMERICAN TELECOMMUNICATIONS INDUSTRY. ALCATEL TELECOM RELIES ALMOST EXCLUSIVELY ON RHK'S STAR PROGRAM FOR MARKET INTELLIGENCE COVERING TRANSPORT, ACCESS AND WIRELESS.”

Marion A. Gebhardt
Senior Director, Strategic Planning
Alcatel Telecom



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consulting and research in communications services and technologies

Company Headquarters

ryan • hankin • kent, inc.

601 Gateway Boulevard, Suite 550
South San Francisco, CA 94080
tel: (415) 737-9600
fax: (415) 737-9766
web: www.rhk.com

Dallas Sales Office

ryan • hankin • kent, inc.

800 East Campbell, Suite 199
Richardson, TX 75081
tel: (972) 680-5106
fax: (972) 680-5107

Virginia Sales Office

ryan • hankin • kent, inc.

46400 Benedict Drive, Suite 103
Sterling, VA 20164
tel: (703) 450-7118
fax: (703) 450-7119

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