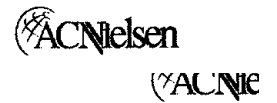


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**11. INDEPENDENT MARKET RESEARCH REPORTS**

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Date:- 20 March 2001

This Report has been prepared for inclusion in the Prospectus to be dated 30 March 2001 pursuant to the proposed listing of Edaran Digital Systems Berhad (EDARAN Group) on the Main Board of the Kuala Lumpur Stock Exchange.

This report has been prepared with the intention to provide an overview of the industry as well as the operations of the company within the industry. **ACNielsen** had conducted the research as an independent third party, basing its report on publicly available information and economic trends to indicate the future direction of the industry.

A handwritten signature in black ink, appearing to read 'Lee Joo Lee', is written over a horizontal dotted line.

Lee Joo Lee  
**ACNielsen (Malaysia) Sdn Bhd**  
Executive Director  
Customised Research

# 1. Research Methodology

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## 1.1 Desk Research

Desk research has been conducted to obtain a general overview of the IT and Telecommunication support industries. The collection of secondary data has been gathered from government agencies and public materials whenever appropriate.

The information gathered has facilitated an analysis of both industries in terms of profile, growth, factors affecting growth and dynamics as well as linkages to other sectors of the economy. It also provides an understanding of various market trends and the wider market environment particularly in the light of a developing 'converged' market.

## 1.2 Primary Interviews

Apart from desk research, primary data has been collected from telephone trade interviews with vendors and service providers within industry. These interviews have enabled building a qualitative perspective of the IT and telecommunication support industries in general as well as a view of the competitive environment.

## 2.1 Nature of business

**Edaran Digital Systems Berhad** Group (hereinafter known as “EDARAN Group” or “the Group”) is a *one-stop total solutions provider* offering a wide spectrum of cross-sellable telecommunications and IT products and services. Presently, its business activities are carried out by the three main companies of the Group, namely:

1. EKOM
2. ECOMM
3. EMAC

**EKOM** - the focus of the company’s business is on computer system integration. System integration (SI) allows EKOM to provide customised solutions to its clients by integrating discrete computer hardware and software components to meet the customers’ specifications. Following is a description of some of the services provided by EKOM:

➤ **System integration (SI) services**

Through SI, EKOM provides a total solution consolidating around a combination of IT services and/or IT products tailored to customers specific requirements. The solution contains all the necessary hardware, software, application development, IT consulting and networking components, usually in conjunction with training, support and maintenance

➤ **Application Development**

From confirming business requirements to design, development, testing and installation of systems, EKOM employs a proven and systematic project methodology to ensure smooth implementation of the whole solution. The development and implementation of computer applications addresses: -

- Identifying user requirements;
- Designing the solution;
- Developing application systems;

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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- Testing and acceptance of application systems; and
- Implementing the solution.

Apart from development and delivery of application systems, EKOM also offers application support and maintenance, which includes: -

- Handling change request;
- Rectifying application errors;
- Providing post implementation reviews; and
- Analysing new requirements for system enhancements.

By means of successfully completing numerous large SI projects, EKOM has proven its capabilities in delivering various types of systems and particularly in mission critical, on-line real-time based transactional environments.

➤ **Network Management Services**

EKOM is a value added network service provider offering fast and effective end-to-end data communications solutions. The Network Management Services include: -

- Site preparation and cabling of specific sites within buildings; and
- Network integration for wide area networks (WAN) and local area networks (LAN).

➤ **Consultancy Services**

EKOM offers a variety of IT services, which are not only technical but addresses all aspects of IT; to meet requirements of businesses in the following areas:

- Applications systems development;
- Network facilities management;
- Feasibility analysis;
- Hardware and software selection;
- Training; and
- Turnkey management.

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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**➤ Total or Partial IT Outsourcing Service**

From Hardware Maintenance to Data Centre Outsourcing, EKOM can offer a wide range of services. Initially, identifying and addressing customers' need, EKOM formulates reliable and cost effective solutions to ensure its customers' long term viability.

Through the anticipated future provision of outsourcing, the Group's customers are able to redirect resources from non-core activities and would be able to concentrate to run its core business.

Outsourcing can be broadly classified as: -

- Total outsourcing - managing all activities of a customer's service inclusive of asset and personnel, e.g. application development, data centre, network, desktop and records management.
- Partial outsourcing - handling only specific or other activities of a customer's technology solutions.

The following is a brief description of some IT outsourcing services:

1. Infrastructure management - this is the continuous management and operation of data center based information system services for customers. The provision of services can use either customer or service provider owned hardware from either the customer's own premises or a remote service provider data center. The scope of service can range from a single system to the outsourcing of a complete IT infrastructure. The infrastructure platform includes mainframes, mid-range and distributed systems from a wide range of manufacturers.
2. Applications Management/Development – this is a contract for the continuous management and execution of any or all activities related to the maintenance, enhancement and evolution of applications.
3. Business Process Management - this is the management of a client's processes through remote outsourcing using advanced computer and communications technology, and computerised workflow management techniques.

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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In the above scenarios, the customer still maintains control by retaining strategic direction, decision-making and judgmental processes while EDARAN Group manages and performs the rule based activities, while managing and supporting systems.

➤ **Help Desk and Maintenance Services**

EKOM provides a one-stop service, which is a focal point for customers experiencing telecommunications and IT related problems. Two types of programmes are offered to customers:

1. Limited programme - this service operates on a 9 a.m. to 5 p.m. basis
2. Extended programme - operates on a 24 hours x 365 days basis.

The above services are available in all states of Malaysia and are especially important for:

1. Mission critical systems; and
2. Strategic locations e.g. Malaysian Airline System Berhad.

➤ **Total Solutions**

Through effort and dedication, EKOM has been able to provide the Government and commercial sectors with total solutions. Among their achievements are:

- Computerisation of one of the Prime Minister's Departments with services namely Unit Penyelarasan dan Perlaksanaan ("UPP") Net, platform for the project monitoring system, nationwide network linkage and support.
- Development of nationwide network for Kintetsu Integrated Air Services Sdn Bhd, an international freight forwarding company.
- IT infrastructure installation and Sistem Maklumat Kastam application development for Jabatan Kastam dan Eksais DiRaja Malaysia.

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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**ECOMM** - provides engineering services, hardware, infrastructure, fiber optic cable and microwave links to the telecommunication industry. ECOMM has an edge in providing:

- Fiber Optic Transmission equipment and services;
- Network Management System;
- Structured cabling; and
- Communication network consultancy service.

**EMAC** – is an investment holding company, which has expertise and experience in the power supply systems, consisting of batteries and rectifiers to the telecommunications industry.

A major customer of both ECOMM and EMAC is Celcom (M) Sdn Bhd (“Celcom”), Malaysia’s leading mobile communications provider. Systems and services provided to Celcom include:

- Microwave Radio Transmission;
- Fibre Optic Transmission;
- Power Rectifier System; and
- Network Management System.

### **2.1.1 Products**

EDARAN Group, through its dealerships with various suppliers, representing major brand names such as Siemens, Oracle and NEC, offers an extensive range of hardware, software and communications products to its customers.

The products supplied by EDARAN Group are as follows:

**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')****Table 1: Products supplied by EDARAN Group**

COMPANY	PRODUCTS	PRINCIPAL
EKOM	<ul style="list-style-type: none"> <li>▪ Mainframe systems, Computer hardware/software systems</li> <li>▪ Servers</li> <li>▪ Personal computers, Notebook, Printers</li> <li>▪ Intelligent Crew Management Systems</li> <li>▪ Relational Database Management Systems</li> <li>▪ Inventory Systems</li> </ul>	<p>NEC</p> <p>IBM, NEC, Fujitsu, Sun, Compaq, Hewlett Packard etc.</p> <p>NEC, IBM, Fujitsu, Compaq, Acer, Dell, Hewlett Packard etc.</p> <p>Silverlake</p> <p>Oracle, Informix, Unify</p> <p>Datastream</p>
ECOMM	<ul style="list-style-type: none"> <li>▪ Synchronous Digital Hierarchy Systems (SDH)</li> <li>▪ Digital Microwave Radio Systems</li> <li>▪ Integrated Customer Care Systems</li> <li>▪ Marketing Decision Support Systems</li> <li>▪ Spread Spectrum Radio Technology Systems</li> <li>▪ Fraud Management Systems</li> <li>▪ Remote Connectivity</li> <li>▪ Frame Relay, X. 25, Telebit Modem, Asynchronous Transfer Mode (ATM), Prepaid Card</li> <li>▪ Infotac, Personal Messenger, Mobile Data Products</li> <li>▪ Voice Messaging Systems</li> <li>▪ Multipoint Network Products</li> </ul>	<p>Siemens</p> <p>Siemens, Siae Microelectronica</p> <p>Hewlett Packard, Clarify</p> <p>EMC, Hewlett Packard</p> <p>Western Multiplex</p> <p>Compaq</p> <p>Telepartner International</p> <p>Global One</p> <p>Motorola</p> <p>Lucent Technologies</p> <p>Multipoint Network</p>
EMAC	<ul style="list-style-type: none"> <li>• Power Supply Systems (Batteries)</li> <li>• Power Supply Systems (Rectifier)</li> <li>• Power Supply Climate Systems</li> </ul>	<p>Exide Technologies</p> <p>Argus Technology</p> <p>Emerson</p>

**2.1.2 EDARAN Group's market position**

EDARAN Group is an established provider of IT and telecommunications products and services, system integration and application development in Malaysia. For a group such as EDARAN to survive in the communications, software, hardware,



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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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network and e-market industry, the infrastructure facilitating the necessary flexibility, reliability, redundancy and fail-safe operation are crucial for ongoing success.

The long list of EDARAN Group's successful achievements and its long-term relationships established with local IT and telecommunication companies and Government agencies are proof of their reputation, experience and expertise in a highly technical k-based industry. The cutting edge that the Group has over all of its competitors is the acknowledgement of its value-added services, supported by well equipped and knowledgeable service consultants.

The Group is well positioned as one of the major players in the IT and telecommunications support industry. Although the Group competes with other players in the industry, there is at the same time an interchange of business activities among the Group with its competitors.

The dominant factors, which contribute to the Group's success, are as follows:

1. Expertise - in-depth knowledge of critical applications, systems and the application of appropriate convergence technology.
2. Vision - awareness of what is happening and what the possibilities are.
3. Partnership - the Group addresses the requirement for in-depth expertise through partnership with multiple vendors each contributing specific values:
  - Expertise which provides appropriate solutions for well-defined problems;
  - Products with value-added potential;
  - Well-designed product, meeting all existing standards and also readily adapted; and
  - Demonstrated ability to provide solutions.

## **2.2 Sources of Raw Material**

Most of EDARAN Group's hardware peripheral requirements are sourced locally to make it easier for the Group to monitor their availability and enable faster access. Occasionally, to avoid interruptions of supply, power system equipment is sourced from an offshore principal. The Group is also value added resellers (VAR) of products from foreign companies such as Siemens AG, Global One and Motorola.

### ***2.3 Research and development (“R&D”)***

In a rapidly changing IT industry, services business need to be technically sound and innovative in order to stay competitive. New and upgraded versions of software and hardware are constantly being introduced into the market. Hence, R&D is essential for product innovation and product improvement to ensure a continuance of serving a customer's need.

Although, as a distributor, EDARAN Group does not develop its own products, it represents giants and leaders in product development of the IT industry, who are investing in R&D activities in order to stay competitive. Hence, the Group has the advantage of not only enjoying the benefits of distributing world-class products but also relieved of the heavy costs of investing in R&D. Nevertheless, the management of EDARAN Group is well aware that high levels of technical competence are required in the IT industry with strong capabilities in overall technical knowledge, software development, customer applications and the integration of products to meet customers' requirements.

Hence, EDARAN Group has throughout the years accumulated experiences and technical knowledge to integrate its principals' products to provide total solutions packaged according to individual customer's requirements. The Group further provides value-added services by identifying and recommending compatible hardware and software products to fulfil its customers' need, which do involve a certain amount of R&D activities in order for integrated systems to perform perfectly. The EDARAN Group has invested more than 12 years learning the trade and developing its business. It has placed great emphasis on new technologies and has invested substantially on technical expertise in the advancement of its business. The Group has gained experience and expertise through its representation of niche products and its association with equipment principals, who provide continuous R&D expertise and technical knowledge in the usage of their products and equipment.

### ***2.4 Competitive advantage of the EDARAN Group***

EDARAN Group has developed a competitive edge in both IT and telecommunication fields. It has both the expertise and engineering services and equipment that create effective and efficient telecommunication infrastructure. With its experience in the industry for more than 10 years, the Group is also able to integrate the best convergence technologies, system integration and application development tailored to a wide variety of business need.

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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The Group believes that its competitive edge is due to the following factors:

- Established long term partnership with key customers;
- All systems supplied and implemented by the Group are functioning smoothly;
- Substantial expertise and knowledge of equipment and excellent service;
- Good support from principal suppliers;
- Strong business network, an integrated organisation with a diversified range of products and technological knowledge; and
- An established reputation with public and Government agencies based on performance on past and on-going projects.

EDARAN Group's inherent strength and capability is drawn from a team of experienced and knowledgeable management and personnel. It is also able to draw on technological expertise from its suppliers, who provide the Group with access to emerging technologies, together with R&D on customised applications software.

## **2.5 Human Resource**

Presently, the EDARAN Group has 113 employees. In line with Government's concept of "Our people, Our asset", the Group places great emphasis on the training and development of its human resources.

The backbone of the EDARAN Group is its qualified and experienced engineering and technical staff to ensure high standards of service, applications development and solutions provision. Most senior management personnel are long serving employees with the Group.

The Group believes that its success will depend to a certain extent upon the abilities and continued efforts of its existing Directors and senior management, as well as its ability to attract and retain new skilled personnel. Every effort is presently undertaken to groom younger members to play key roles in the Group's business operations. Technical staffs are trained overseas by the Group's equipment principals including companies such as Siemens AG, Argus Technology and Lucent Technologies.

**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')****Table 2: Employees of EDARAN Group (as at 19 March 2001)**

No	Category of employees	No. of Employees
<b>EDARAN</b>		
1.	Managerial & professional	6
2.	Technical & supervisory	4
3.	Administration	2
4.	General workers	-
5.	Total	<b>12</b>
<b>EKOM</b>		
6.	Managerial & professional	6
7.	Technical & supervisory	34
8.	Administration	6
9.	General workers	4
10.	Total	<b>50</b>
<b>ECOMM</b>		
11.	Managerial & professional	3
12.	Technical & supervisory	28
13.	Administration	8
14.	General workers	2
15.	Total	<b>41</b>
<b>EMAC</b>		
16.	Managerial & professional	1
17.	Technical & supervisory	7
18.	Administration	-
19.	General workers	2
20.	Total	<b>10</b>
<b>EDARAN Group - TOTAL</b>		<b>113</b>

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**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

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## **2.6 Modes of Distribution**

Throughout more than 12 years of operations, EDARAN Group has built up an experienced team of sales personnel, consultants and engineers to market its services and products. The management of EDARAN Group has strategically focused the Group as telecommunication and IT services provider, which markets and distributes its services through direct and personalised marketing to commercial sectors, Government departments and institutions.

Further, in order to solicit new contracts in this competitive market, the Group has adopted the strategy to actively participate in tenders, direct and personalised marketing, initiate recurring services from existing customers and through the referrals of new business from existing customers.

The methods of EDARAN Group's distribution include mainly:

- Direct marketing to principal markets e.g. Government & its agencies; and
- Through existing client network.

## **2.7 Major Customers**

In its 12 years in the telecommunication and IT industries, EDARAN Group has acquired a long list of customers from Government agencies to large enterprises in the commercial sector. This will ensure the Group's presence in the market for many years to come. It has plans to provide total local support to cut operating costs and to decrease its dependence on its offshore principals, namely NEC Corporation, Siemens AG and Siae Microelectronica.

EDARAN Group has endeavoured to venture into other avenues relating to the IT industry. Hence, the Board of EDARAN foresees that the Group will not be overly dependent on any single customer in the future. The Group's top customers are Jabatan Kastam dan Eksais Diraja Malaysia and Celcom (M) Sdn Bhd. However, EDARAN Group has a wide spectrum of customers comprising both public and private sectors. Confidence and trust earned from previous projects implemented, has led to recurring contracts awarded to the Group. The major customers of EDARAN Group for the two (2) financial years ended 30 June 1999 and 2000 are set out in the table below:

## 11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')



**Table 3: Top customers of EDARAN Group As At Financial Year Ended 30 June 1999 and 2000**

	1999	2000	Years*
<b>EKOM</b>			
0.1% to 5%	Jabatan Perdana Menteri	Jabatan Perdana Menteri	1
	Bandar Baru Kelang Medical Center	Bandar Baru Kelang Medical Center	1
	Dewan Bahasa dan Pustaka	-	1
	Jabatan Perkhidmatan Awam	Jabatan Perkhidmatan Awam	3
	Celcom (M) Sdn Bhd	-	8
	Kintetsu Integrated Air Services Sdn Bhd	Kintetsu Integrated Air Services Sdn Bhd	8
	Pusat Sistem Maklumat Bersepadu (UiTM)	Pusat Sistem Maklumat Bersepadu (UiTM)	1
	NEC Corporation Japan	NEC Corporation Japan	11
	Jabatan Kimia Malaysia	Jabatan Kimia Malaysia	4
	Kementerian Sains, Teknologi & Alam Sekitar	-	2
	Tanjong Rhu Resorts	Tanjong Rhu Resorts	3
	Tenaga Nasional Berhad	Tenaga Nasional Berhad	2
5.1% to 9.9%	Malaysian Airline System Berhad	Malaysian Airline System Berhad	5
10% to 29.9%	Jabatan Kastam & Eksais DiRaja Malaysia	-	11
30% to 50%	-	Jabatan Kastam & Eksais DiRaja Malaysia	11
<b>ECOMM</b>			
0.1% to 5%	Lucent Technologies (M) Sdn Bhd	-	3

**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

	Malaysian Airline System Berhad	-	4
5.1% to 9.9%	-	Lucent Technologies (M) Sdn Bhd	3
10% to 29.9%	-	Celcom (M) Sdn Bhd	8
30% to 50%	Celcom (M) Sdn Bhd	-	8
<b>EMAC</b>			
0.1% to 5%	Ericsson	Ericsson	3
5.1% to 9.9%	Celcom (M) Sdn Bhd	Celcom (M) Sdn Bhd	5
10% to 29.9%	-	-	
30% to 50%	-	-	

Note: \* Years of relationship.

*The percentage of the above major customers is based on the turnover for years 1999 and 2000.*

## 2.8 Major Suppliers

Most of EDARAN Group's hardware peripheral requirements are sourced locally to make it easier for the Group to monitor their availability and enable faster access. Occasionally, to avoid interruptions of supply, power system equipment is sourced from offshore principals, namely Argus Technology Ltd, Canada and Exide Technologies. The Group is also value added resellers (VAR) of products from foreign companies such as Siemens, Global One and Motorola. Its major suppliers are Mitsui, Mesiniaga and Siemens for the financial year ended 30 June 1999 and 2000. The table below sets out the major suppliers of EDARAN Group:-

**Table 4: Top suppliers of EDARAN Group**

	1999	2000	Products	Years*
<b>EKOM</b>				
0.1% to 5%	Compaq Computer Corporation (M) Sdn Bhd	-	PCs, Notebook, Servers & Printers, Software and accessories	11

**11. INDEPENDENT MARKET RESEARCH REPORTS (Cont')**

	CSA Distributors Sdn Bhd	CSA Distributors Sdn Bhd	Computer hardware/software and accessories	8
	Control Data System Sdn Bhd	Control Data System Sdn Bhd	Computer hardware/software and accessories	7
	Fujitsu Computer System (M) Sdn Bhd	Fujitsu Computer System (M) Sdn Bhd	Computer hardware/software and accessories	6
	Applied Business System Sdn Bhd	Applied Business System Sdn Bhd	PCs, Notebooks, Servers & Printers, Software and accessories	5
	Power Protection (M) Sdn Bhd	Power Protection (M) Sdn Bhd	Computer hardware and accessories	5
	Unisys (M) Sdn Bhd	-	Computer hardware and accessories	4
	Wellnet Sdn Bhd	Wellnet Sdn Bhd	Training and services	3
	SL Information Systems Sdn Bhd	-	Computer hardware/software and accessories	3
	Mesiniaga (M) Bhd	-	Computer hardware/software and accessories	2
	EC Partners Sdn Bhd	EC Partners Sdn Bhd	Computer hardware/software and accessories	2
	-	NEC Sales (M) Sdn Bhd	PCs, Notebooks, Servers & Printers	12
	-	GiatAce Sdn Bhd	Computer hardware/software and accessories	4
5.1% to 9.9%	Mitsui and Co. Ltd	-	Computer hardware/software and accessories	7
	NEC Sales (M) Sdn Bhd	-	PCs, Notebooks, Servers & Printers	12
	GiatAce Sdn Bhd	-	Computer hardware/software and accessories	4
	-	Mesiniaga (M) Bhd	Computer hardware/software and accessories	2
10% to 29.9%	-	-	-	-
30% to 50%	-	Mitsui and Co. Ltd	Computer hardware/software and accessories	7
<b>ECOMM</b>				
0.1% to 5%	Photon Technologies Sdn Bhd	Photon Technologies Sdn Bhd	Fibre Optic Cable	4
	Hewlett Packard Sales (M) Sdn Bhd	Hewlett Packard Sales (M) Sdn Bhd	Computer hardware/software, Notebooks and accessories	2