

2<sup>nd</sup> annual UNIX conference 9-12 February 1992 – delayed from 1<sup>st</sup> December 1989 due to invasion by Iraq

# FIRST ARABIAN GULF UNIX CONFERENCE

Dec. 18-20, 1989, Kuwait Regency Palace Kuwait

# IN THE ARAB WORLD

Sponsored By GULF/USR/GROUP

# MESSAGE

GULF USR GROUP

It is indeed a great pleasure - to see yet another Technical Conference being held in Kuwait.

The impact of the Technology has not only affected the way business is run today, but it also has affected our daily lives, and the rate at which this technology is evolving, makes it imperative for us to hold this type of events. (either as planner or user), to educate ourselves and exchange information.

What makes this conference especially an important event, is that it addresses a new type of rechnology to our region, a rechnology that is received as the longwaited type of standards to make our lives easier with the incompatibility issue of todays technology.

On this occasion, I would like to wish the Arabian Gulf UNIX User Group and the Organizer, all the success in their present G future efforts.

I hope this gathering achieves it's objective, and wish our visitors a very pleasant stay in Kuwait.

Dr. ABDULRAHMAN AL-AWADI MINISTER OF PLANNING

# Welcome to the First Arabian Gulf UNIX Conference!

GULF USR GROUP

As acting chairman of the newly formed Gull Unix Users Group, Gull UniForum, it gives me great pleasure to present the First Annual Unix Conference in the Middle East. This event, the first of its kind solely dedicated to Unix technology, is really the inauguration of Unix in the Arab World and I believe will send a strong signal to the region that Unix has arrived.

As you may already know, Unix has come of age throughout most of the world, More and more companies, agencies and organizations in Education, Government and more recently in industry are realizing the practical and economic benefits of Unix and implementing Unix-based solutions in their operations. Such progress however has not been as forthcoming in the Middle East due to the absence, until now, of a Unix information and marketing infrastructure.

I fully expect that this and subsequent conferences will provide the necessary Unix information exchange centers for users, developers, integrators and distributors and that they will offer the impetus for Unix hardware and software vendors to expand their sales and distribution channels thus creating an infrastructure to spur the growth of Unix in the region.

Further, I am confident that this event will help current users and potential users by offering the opportunity to attend conferences and tutorials, witness exhibitions and participate in hands-on demonstrations specifically geared to Unix systems and solutions. They will be able to compare costs, capabilities and technologies and discuss their specific needs with experts in the Unix field. This conference will prove to be the most complete and comprehensive Unix learning experience to date.

Finally. I would like to encourage everyone to join UniForum, the International Association of UNIX Systems Users as well as the Gulf Region UniForum and Affiliate Group in each country. These Affiliate Groups will provide the ongoing exchange of information via meetings and presentations in each local area and keep their community current with all Unix developments.

I thank you for attending this conference and I hope you find it both informative and rewarding

RAYMOND P. KASBARIAN, PRESIDENT. IMT Multilingual Systems Inc Acting Chairman Gull UniForum, the Gulf Unix Users Group

# **Speakers** - Tutorials

# John Muster

GULF USR GROUP

As prelident of Lumix Systems Administrator Curriculum Project. Mr. Muster designed the IRS job analysis study, and has been involved in all aspects of materials development and implementation of the re-design project. As university professor and executive secretary of the American Association of Physics Teachers, John Muster has been involved in the development and testing of modular teaching materials since 1963. He has taught UNIX at the University of California and his advanced academic work centers on the issues of teaching UNIX and the refinement of the techniques that make modular teaching effective. He is co-author of several UNIX texts including UNIX for people, Prentice Hall, publisher, UNIX Power Utilities, MIS Press, Publisher, and UNIX Made Easy, Osborne McGraw-Hill, publisher.

# **Dominic Dunlop**

Domonic Durlop is an independent consultant working in the area of standards for information technology. He has been active in this field since the early nineteen cighties, and currently represents Usenix and the European UNIX systems User Group at ISO POSIX working group meetings. A co-founder of Sphinx Ltd., the first European distributor of software for open systems, Dunlop was responsible for the porting and support of a wide range of application packages running on many platforms under the UNIX and MS-DOS operating systems. His tan years of experience with UNIX began with the support of the Zilog System 8000, one of the first multi-user super-micro systems to reach the market.

Dunlop holds a Bachalor of Engineering in Electrical and Electronic Engineering form the University of Bradford.

# Jeffrey S. Haemer

Jeffery S. Haemer is a senior member of the Technical Staff in the Colorado technical office of INTERACTIVE Systems Corporation. He was involved in various aspects of internationalization for both European and Kanji versions of IBM's AIX, and has managed ports of IN-TERACTIVE's TEN-PLUS user interface to many machine types and UNIX variants. He is a past presenter of UniForum tutorials on «Porting and Portability in the UNIX Environment-(UniForum'88) and «Managing Applications Portability», (Uni-Forum DC, Uniforum '89, Uni-Forum Boston) as well as a pair of workshops (UniForum/ Boston).

Haemer currently serves as report editor for the Usenix Association's POSIX Watchdog Committee.

# Speakers - Conference

# Raymond P. Kasbarian

President/IMT Multilingual systems INC.

Mr. Kasbarian has had over 20 years of business experience primarily in executive and management positions related to computer technology. He has been CEO of three corporations and has been in management and sales positions at AT & T and IBM.

He holds a BSEE degree with a specialization in computers from New Jersey Institute of Technology and he has taught or attended many professional and graduate courses in management strategic planning and technical subjects.

## Craig Skelton

Craig Skelton Has an Honours Degree in Computer Science gained at the North Staffordshire Polytechnic. He has been in the computer industry for eight years. He has been working with UNIX as a Developer, Analyst and in Technical Management.

Craig is one of SCO's founder members of it's international operation with particular responsibility for Middle East/ Africa.

# Andre A. Bellotti

Director R&D

Multilingual Systems INC. Mr. Bellotti is an electrical and computer systems engineer with a comprehensive UNIX/C background and a strong emphasis in microcomputer architecture and systems application.

Throughout his career he has been responsible for the dasign and development of many multilingual systems including the current IMT operating systems enhancements along with bilingual hotel billing systems, bilingual word processors, and other general systems.

Mr. Bellotti is fluent in Arabic French and English. He is a member of the users group's standards committee on the internationalization of UNIX. He holds a Masters degree in systems engineering from Polytechnic Institute of New York and a BSEE from New Jersey Institute of Technol

#### UDO J. Kirchner

Mr. Kirchner is an expert and locturer on Image Processing systems and Integration of Total Image Porcessing Applications.

He is with Multimedia Systems; a division in BULL S.A. In Marketing and sales Development and handles products of Image Processing, Disk Publishing and other related products.

## Wilhelm Burger

Wilhelm Burger was born in Munich, West Germany. He received the M.A. and Ph.D. degrees in computer sciences from the University of Texas at Austin.

In 1981 he joined the IBM T.J. Waston Research Center as a Research Staff Member, where he participated in a network language implementation project. At present he is a member ol the Secure Distributed Systerns Department at the IBM System Integration Division. Where he has been involved in research, design, and implementation of distributed systems leaturing high availability and multilevel security. His interests include mathematical modeling, compiler construction techniques, distributed systems, and computer security.

# Pascal Beyls

Pascal Beyls is presently the head of the Centre de Competence Unix ("Unix Competence Center") for Bull. He received his diploma in 1973 from Ecole Superieure d'Electricite in Paris, and worked on the definition of real time systems used by the French Navy on board its ships.

In 1979, he joined Sems, which was acquired by Bull in 1982.

In 1978, he joined sems which was acquired by Bull in 1982. In 1983, he helped develop the company's first Unix machines. Expert on Unix internationalisation, he directed the developments of an Arabic vorsion of Unix. He is currently representing Bull at X/Open as Technical Manager.

#### Brian Clark

Brian Clark has spont the last 9 years working as a Systems Engineer with the Unix operating system. He has been responsible for installing Unix systems in countries as far apart as England and Kuwalt. At present Mr. Clark provides training and consultancy services to a number of Unix companies and users, in the USA. Europe and the Middle East. Mr. Clark holds a Bachelor's Degree in Electronic Engineering and a Master's Deoree in Computer Science.

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# Jan L. de Waard

Senior Sales Executive with Sequent, He is responsible for sales activities in Holland, Belgium, the Scandinavian countries and the Middle East.

His previous employer was Data General, where he held a similar position for 3 years.

He has a higher education in economics.

#### Mohammed Ajouz

Garaduate of Stanford University Mr. Ajouz has been working with Oracle since 1986.

Mr Ajouz has been involved in marketing and technical support for all Oracle Systems in the Middle East-Running under UNIX and VMS.

#### Toni Prince

Holds Ma. Engineering degree from Texas A & M University, Mr. Tony is Ex-faculty member at the American University of Boirut. He is a lecturer in computer science subjets and is member of ASME and TAN BETAPLHe joined BULL (Lebanon) as Technical support Engineer in 1988 and is presently responsible for marketing and technical liaison in the United Arab Emirates.

#### Ing. Bart van Knijff

Senior Software Analyst with Sequent in close association with one of the Sequent Sales Executive in outstanding sales opportunities.

His previous employment was with NCR where he was responsible for UNIX support.

His educational training was done at the Free University in Amsterdam where he studied under Professor Tannenbaum "Operating Systems and Computer Architectures."

#### Khalid Al-Farkh

A B.Sc., in Electronics & Communications from Cairo University, Mr. Khalid is working with International Turnkey systems as Senior Systems Analyst. He joined ITS in December 1987.

He is an expert in communication and Arabic related compulor development projects.

He has undertaken several Arabization tasks during the last five years, and has experience in UNIX based systems.

#### Peter Coakley

Mr. Coakley has vast experience in the Oil industry. He has worked for seven years with Shell Oil Middle East and Shell Oil U.K. as Technincal Advisor, Planner, Besearch Engineer and Field Engineer.

His work experience covers large scale computing projects, product specialist, datacomms and networking, Research and Development and Strategy Planning,

#### Sami Onsy

Received BSc degree in electrical engineering from alexandria university, Egypt in 1968.

Joined NCR in 1971 in the field engineering department.

Worked on the development of various products especially in the area of Arabization.

Becipient of NCR Monitorious Technical Achievement Award for research and development.

Currently managing the product marketing of NCR communications products for the Middle East area.

#### Leon Georglades

Has over 8 years experience in manufacturing planning and control applications and is responsible for the coordination of NCR's manufacturing marketing program for the Middle East area.

Prior to joining NCR Middle East, he was responsible for implementing manufacturing applications in major industrial organisations in Australia (NCR Australia).

He has studied electrical engineering & industrial management and is a member of the American Production and Inventory Control Society (APICS).

# Synopsis

#### Introduction to UNIX

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How can I use UNIX to do useful work? This tutorial takes participants from logging in all the way to text processing and electronic mail. Along the way, it introduces a variety of UNIX fundamentals, including file manipulation, directory structures, basic Shell utilities, and editing. There are no prerequisites.

## **UNIX Shell Programming**

This tutorial examines one of the most powerful features of the UNIX environment the Shell, Participants will learn how to write Shell scripts in both C and Bourne shells, and how to customize their UNIX environments, Attendees should have experience using the UNIX operating system.

# **UNIX Administration I**

UNIX is a powerful multi-user, multi-processing operating system. UNIX systems need to be administered safety and professionally. Participants will learn to add and remove users and peripherals, back up and maintain the file system, use system administration utilities, and troubleshoot system problems. Attendees should have a working knowledge of the UNIX operating system.

## UNIX Administration II

This tutorial will examine more advanced topics than the preceding course, including networking, system security, and resource planning. Attendees should either have system administration experience or have attended "UNIX Administration 1"

# Introduction to C Programming I

UNIX is, traditionally, a superb development environment for C programs. The course will examine expressions, variables, pontrol structures, the standard I/O library, arrays, and functions. Attendees should have some experience in programming.

# Introduction to C Programming II

This is an extension to the previous course, and will examine structures, pointers, the UNIX system interface, and other advanced topics. It will be useful for attendees to have either C programming experience, or "introduction to C Programming I",

# Sunday: December 17, 1989

09.00 - 17.00 16.00

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All day registration Opening Ceromony Welcome Speech-Keynote Address-Unix in the Arab World-Opening of Exhibition Hall. Reception

His Excellency The Minister of Planning Sheikh Ali Jaber Al-Ali Al-Sabah Raymond P.Kasbarian, President IMT

Exhibition Hall hours daily from 09.00 a.m. - 13.00 p.m. and from 13.00 p.m. - 20.00 p.m.

# Monday: December 18, 1989

# Tutorials

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09.00	- 12.30 :	Introduction to UNIX
	LUNCH	BREAK
15.30	19.00	UNIX SHELL Programming

# Conference

09.00	•	10,30 ;	The Economics of UNIX
11.00	-	12.30 :	UNIX in the 1990's
		LUNCH	BREAK
15.30	+	17.00 :	UNIX Standards and Open Systems
17.30		19.00 :	Growth of UNIX APPLICATIONS

# Primers

09.00 - 10.30	UNIX System Overview
10.30 - 17.00 2	UNIX System Overview

# Tuesday: December 19, 1989

# Tutorials

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- 09.00 12.30 : UNIX Administration I LUNCH BREAK
- 15.30 19.00 : UNIX Administration II

# Conference

- 09.00 10.30 : UNIX Communication Networking 11.00 - 12.30 : Arabization Solutions Under UNIX
- LUNCH BREAK
- 15.30 17.00 : Open Forum
- 17.30 19.00 : UNIX Across Platforms

# Primers

- 09.00 10.30 : UNIX System Overview
- 15.30 17.00 : UNIX System Overview

# Wednesday: December 20, 1989

# Tutorials

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09.00 -	12.30 :	Introduction to C Programming (
	LUNCH	BREAK
15.30 -	19.00 :	Introduction to C Programming II

# Conference

09.00 -	10.30:	UNIX Solutions in Qi Industry
11.00 -	12.30 :	UNIX Solutions in Government
	LUNCH	BREAK
15.30 -	17.00:	UNIX and Image Processing
17.30 -	19.00:	UNIX Security

# Primers

09.00 - 10	30: U	NIX System	Overview
15.30 - 17	.00 : U	NIX System	Overview

# DIYAR UNITED TRADING AND CONTRACTING COMPANY

GULF USR GROUP

# COMPUTERS AND SYSTEMS DIVISION

Diyar United, Computer and Systems Division, a part of the Al-Wazzan group of companies, was founded in 1980 and has since been engaged in marketing, distribution and support of computerbased solutions in Kuwait, Irag and Jordan.

Divar's corporate philosphy is to provide «Total Solution to the customer's requirements.

Apart from a very comprehensive range of products and services that Divar offers to the market. It has built up a very competent and efficient organisation for providing a superior level of hardware and software support to its large and distinguished customer base.

#### - Hardware:

a) PRIME EXL-325 5 MIPS 80386 based multiuser system.

b) SUN 3/60 Engineering workstation running UNIX Operating System.

c) LEO 386 high performance 25MHZ IBM compatible PCs.

d) KYOCERA 1200 10ppm laser printer.

e) CALCOMP A3/A4 size M83 and A1 size 1023 plotters.

Ethornet Local Area Network.

#### - Software:

a) COMSYS - Diyar's comprehensive Arabic/ Latin Business Software package along with development tools.

b) Arabic solutions on PRIME EXL-325

c) CAD Software - Personal Designer and Modusa PC on 386-PC.

d) MOSS -Civil Engineering Software on SUN 3/60.

e)PRESTIGE Project Management Software on 386-PC

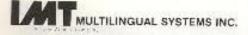
f) TCP/IP software across the network.

g) System/9 Geographical Information System (GIS) on SUN 3/60.

h) Bilingual ASMO compatible PC based terminal emulation software.

i) Personal computer integration with Unix,

Diyar United Trading & Cont. Co. TEL 2524196 2515635/ 2521269 DIR. 2527712 Telex: 23441 FAKHORY KT - Fax: 2527919 P.O.Box 44240, Hawaly 32057, Hawaly, Kowait



# OVERVIEW

IMT Multilingual Systems, Inc. is a computer software and consulting company, active for over 20 years in the international information technology marketplace.

IMT has extensive experience in hardware and software systems development, in technology transfer and in training- throughout Europe, the Middle East and North Africa.

The company has designed and installed many software systems-including word processing, banking, accounting and communications-that require operations in more than one language. This work requires skill not only in computer systems, but in alphabet, character generation and language as well. Skills IMT has developed. and perfected over the years.

#### Background

The need for information technologies keeps expanding throughout the world. Demand for all types of computer hardware and software is at an unprecedented level. One major requirement-the ability to process in languages other than Englishbecomes more vital year by year.

#### Philosophy

IMT understands the needs and requirements of multilingual processing.

IMT is dedicated to the belief that all languages. alphabets, accents and ligatures be supported by all computer systems. And that anyone anywhere in the world have access to the features and efficiency available to computer operations in the English speaking world

#### Mission

IMT's objective is to become the worldwide leader in the design, development and supply of bilingual and multilingual software systems at both the operating and application level.

120 WOOD AVE. SOUTH SUITE 606, ISELIN NEW JERSEY 06600 U.S.A. Tel. 201 5497800 Tix, 200438 (IMT) Fax. 201 549 7858

# Exhibitors



GULF USR GROUP

# COMPUTER & ELECTRONICS SYSTEMS SERVICES DIVISION (CESSD)

The Computer & Electronics Systems Services Division (CESSD) at Bader Al Mulla & Bros. Co. was established in 1983. Since its establishent, the division has been providing services to Bader Al Mulla Group of companies and to the Kuwaiti market.

As a matter of strategy, concentration was made on large accounts and therefore most of the existing client base comprises big companies or public institutions. Besides the big accounts, CESSD services a wide variety of clients; trading and commercial companies, manufacturing plants, schools, service companies or even individuals.

The product mix is another major consideration in CESSD. The back bone of the operation is computer based products. Products and services comprise hardware acquistion, installation and maintenance, software development, systems consultancy and other related services. In this context, it is worth noting that CESSD has pioneered in the field of Image Processing and handles now the two major installations in Kuwait.

#### - REPRESENTATION OF INTERNATIONAL SUPPLIERS

- LASERDATA
- INTEGRATED AUTOMATION
- BULL S.A.
- MICROTEK

P.O. Box: 177 SAFAT - 13002 KUWAIT TEL: 2445040 (60 LINES) TLX 22012 ALMULLA KT. FAX: 02/03 (965) 2437286 2436079



Hamad Abdulla Al Essa & sons Co. was established in 1961, and are the sole agents in Kuwait for a wide range of Hitachi products viz Audio & Video systems and numerous domestic appliances. In the highly competitive market of Kuwait, over the years the company has emerged to be a leading name with a solid financial stability. This is due to a very sound management and more important, a firm view to providing ultimate customer satisfaction.

On the same lines that has made the parent company so successful a computer division was launched in 1984, namely Computer Business Solutions (CBS). As the name appropriately states, CBS aims to provide a solution to the various inherent operational problems faced by businessmen in Kuwalt. With the prime aim of providing the best possible satisfaction to all it's clients, the following major considerations were taken into mind;

- \* The Hardware & Software
- \* Hardware maintenance & support
- \* Software Department
- \* Marketing & After Sales Support

CBS has been very particular in selecting it's hardware and software suppliers. After thorough evaluations CBS selected products from major hardware manufacturers and is now representing the following companies:

- SIEMENS
- BULL HN INFORMATION SYSTEMS, ITALIA COMPUPRINT printers.
- ' GENICOM
- ' TATUNG CO.
- OUADRAM (AN INTELLIGENT SYSTEMS CO.), U.S.A.
- \* ROCKETFIELD COMPUTER SYSTEMS AL-BAYAN & ARABKIT
- \* TEAC
- · QUAD PC
- EMERALD
- LOGITECH

COMPUTER BUSINESS SOLUTIONS DIVISION

P.O. BOX 1371 SAFAT, 13014 SAFAT KUWAIT TEL:2437145 - 2423406 TELEX: 22710 AL ESSA KT FAX: 2402283 - 2450176



GULF USR GROUP

# COMPANY PROFILE

INTERNATIONAL TURNKEY SYSTEMS (ITS) is a Kuwaiti owned, based and financed Company. ITS is committed to the marketing, support, installation and maintenance of Turnkey computer based systems in high technology for government and business organizations in the Gulf Cooperation Council (GCC) countries and Arabian Peninsula.

Since inception in 1981, ITS has experienced solid growth. The company has expanded to 45 professionals. This staff brings to ITS more than 500 man years of technical and management experience. ITS recruits only experienced staff and then provides further intensive education, training and on-the-job experience.

Computers are most evident in the rapid development of the Middle East region. ITS has chosen to provide complete computer Turnkey solutions to assist the development of high technology. Projects include banking, manufacturing, information transfer, finance, communications, medical consulting and educational services.

ITS undertakes a wide variety of the projects for its clients and, according to the computer applications, ITS can properly match the system to the needs of the client. Wether the client is a small business enterprise or a large government organization, ITS will suply professional suport, computer hardware and application software to ensure that greatest possible benefit is obtained from using the computer systems.

ITS is currently operating in Kuwait, Saudi Arabia, Bahrain and the U.A.E. Further expansion is also currently scheduled by ITS and our longer term plans are to establish operations in all Middle East locations. Our financial stability provided by our local parent organization and our wide geographical coverage offers a very high degree of stability which is so important to our clients.

# HEAD OFFICE: P.O.BOX 25729. 13128-SAFAT-KUWAIT

TEL: 2409100 TUX: 23077 ITS KT FAX: 2408664



# KHORAFI BUSINESS MACHINES (W.L.L)

Khorall Business Machines (KBM) was eslabiished in 1987 as sole agent for IBM World Trade Corporation for the purpose of providing continuence of IBM, which has been present in Kuwait for 25 years. KBM, reporting to the IBM headquarters in Parls, reflects the values of IBM excellence in the provision of services such as marketing. systems engineering, customer education and customer engineering to the local information technology market. KBM's staff of 78, headed by Androas Herman, KBM's General Manager, are backed by the worldwide resources of IBM. KBM's substantial customer base represents a wide variety of organizations in the government, banking and commercial sectors of Kuwait. With its assets of staff expertise spanning the IT environment. KBM seeks to provide the best customer support and market the most advanced technology available.

IBM WORLD TRADE CORPORATION P.O. BOX 1175 SAFAT 3012 SAFAT KUWAIT KUWAIT



GULF USR GROUP

# COMPANY

M.I.S. were formed in October 1983 to assist a wide range of potential clients in Kuwait with the design, development, implementation and support of organizational strategies and computer systems capable of meeting the existing challenges of a developing business environment.

M.I.S. were the first company in the Gulf to specialize in computer hardware and software designed specifically for the UNIX operating system.

M.I.S. are committed to providing a complete service which is locally based, professional and comprehensive.

To meet this committent, MIS offers the «state of the art» technology in computer systems as well as adopt the international standards that will protect the customer's investment.

## CORPORATE RELATIONSHIPS & AGENCY AGREEMENTS

M.I.S. has signed during the last three years the following agreements as listed bellow, 1. PYRAMID TECHNOLOGY CORPORATION -

Supermini Computers 2. ORACLE CORPORATION - R.D.B.M.S.

Agreement Type: Value Added Relicencer

3. ALIS TECHNOLOGIES INC. - Bilingual Peripherals

Agreement Type: Exclusive Distributer for Kuwait.

MANAGEMENT INFORMATION SYSTEM5 P.O.Box 20126 Selet 13082, Kuwan Tel. 24224507 24228307 2408152 Fax: 2408153 Tix 20712 GHAFAR

# NCR

# NCR SUPPORTS OPEN SYSTEMS NCR'S STRATEGY

NCR is a leading supplier of computer systems worldwide and in the Gulf Area. With the NCR TOWER family, NCR was the first major computer company to openly support the UNIX System V industry Standard Operating System on a global commercial basis. NCR's value added enhancements enable users to obtain immediate benefits from their powerful TOWER systems without the need for UNIX expertise.

NCR's Strategy in delivering the benefits of Open Systems Architecture Computer technology comprieses the following key elements:

## INDUSTRY STANDARD HARDWARE PLAT-FORMS

The highly successful NCR TOWER family of Multi-user computers form the core of NCR's hardware offering. This is supplemented by the use of both general and special purpose NCR PC based workations which help distribute processing power closer to the demanding professional users.

Furthermore NCR's long term commitment to UNIX is demonstrated by the company's active involvement in X/OPEN, POSIX and UNIX IN-TERNATIONAL committees.

# DATABASE

NCR's hardware platforms have been designed to support the leading brands, such as Informix-SQL/4GL, Oracle and Ingres.

#### APPLICATIONS

Applications solutions covering most aspects of Information Processing needs are being provided as part of NCR's strategy. This includes integration of Office Automation solutions together with the core applications of Market Specific Requirements.

#### NETWORKING

By supporting Industry Standards for both Local and Wide Area Networks. NCR's strategy enables hardware from other vendors also to participate in NCR's Enterprise Network, TCP/IP (Ethernet), TOKEN-RING, SNA and OSI are the major standards NCR is committed.

> NCR CORPORATION - KUWAIT P.O. BOX 27380, SAFAT 18134, KUWAIT TELEFAX: 00965-2420930 PHONE: 00965-2413071/2



The Santa Cruz Operation, Inc. Is a prime developer of systems software and applications packages for the XENIX and UNIX environments. SCO is a privately owned, self-funded software firm committed to systems innovation, product quality, and complete support services for the international XENIX and UNIX community. Founded in 1979 with just three emplyees in Santa Cruz, Californa, SCO now fields a staff of over eight hundred between our U.S. and European offices-including the largest XENIX technic-

al team in the world-and is recognized and respected throughout the computer industry as a trusted developer and supplier of premier XENIX and UNIX multiuser software solutions.

As one of the first companies to recognize the enormous multiuser potential of microprocessorbased systems, SCO delivered the first XENIX Operating System and XENIX-based applications for the Intel 8088 and 8086 PC environments in delivered The SCO XENIX 1983. In 1985. Solution for the 80286 environment. And, in 1987, SCO once again delivered SCO XENIX, as the first multiuser, multitasking operating system for both the new industry-standard 80386- based PCs and the IBM PS/2 series computers. Today. SCO continues to provide market leadership with its latest releases of SCO System V software. Each new version continues to advance the UNIX System as a global standard for microcomputers.

But you need more than just hardwarre and an operating system to develop a market. You need applications software, a distribution network, support, and training and SCO has it all. As a result, SCO is Number One in multiuser business software in the microcomputer world."

SCO has established a worldwide distribution network of value-added resellers, large and small systems integrators, major software distributors, and large retail organizations. In addition, SCO has forged distribution or joint marketing and development agreements with most of the major manufacturers of industry-standard PCs. This worldwide network depends on SCO for extensive technical resources as well as dealer and reseller support programs.

THE SANTA CRUZ OPERATION, LTD, CROXLEY CENTRE, HATTERS LANE WATFORD WD1 3YN UNITED KINGDOM Tel: + 44 (0) 923 815344 Fax: + 44 (0) 923 817781 Telex: 917372 SCOLONG

# COORDINATORS

# The INFORMATION CENTER CO. W.L.L.

INFOCENTER a leading Computer and Management Services and training organisation in Kuwait acts as the bridge between Information Technology suppliers and the business community at large.

# \* Exhibition Promotion and Management

The annual INFO' Exhibition brings together both suppliers and clients, in a stimulating and informative gathering, presenting the latest in Information Technology and Computer development, from overseas and the Gulf. This provides our clients with the facility to capitalise on the availability of information and products in an immediate and constructively organised venue. Our promotion consultants are available for advice on all aspects of exhibition functions, handling, promotion and management.

# **Computer Training**

GULF USR GROUP

INFOCENTER provides comprehensive computer courses for all levels of knowledge and diverse groups. The courses are presented by professionally qualified tutors who are fully experienced and up-to-date with the latest developments in computer technology.

INFOCENTER also provides a fully comprehensive recruitment service for fully qualified Computer personnul with proven experience and track records through:

- Executive Search (Head-Hunting)
- Advertised Recruitment
- Computerized "Talent Bank" files

# \* Management Consultancy and Training

INFOCENTER'S full-time professional Management and Training Consultancy learn are fully experienced in conducting in-company surveys, analyses, examining major change projects such as new automation, appraisal schemes, or Management and Organisational studies and recommending appropriate Management action to solve or rectify problems. Training programs can be customised to fulfill the requirements of client companies and are at all times aimed at achieving maximum results in terms of behavioural change toward improved performance and increased profitability.

#### Software Services

INFOCENTER has developed an extensive and comprehensive Library of software application systems designed to meet the needs of both large corporations and the small business enterprise. Our full-time professional staff are specifically dedicated to analysing and identifying our client needs and developing solutions to satisfy those needs.



The INFORMATION CENTER CO. W.L.L. Computer Services and Consultancy 9/08/226625544. (112) Knower DI 24/5271/2. 2450281/2 The 46/31108/CVTR & Flax. 246/5353/AIFutush Commercial Center. Opposite Al Salba Commercial Center.

# Acknowledgements

The organisers of The First Arabian Gull UNIX Conference and Exhibition «UNIX in the Arab World» wish to express their doep appreciation and gratitude to the distinguished speakers, and the chairmen of the various sessions and to those who served on the committees and devoted their time and efforts in planning and prepering for the conference.

From U.S.A .:

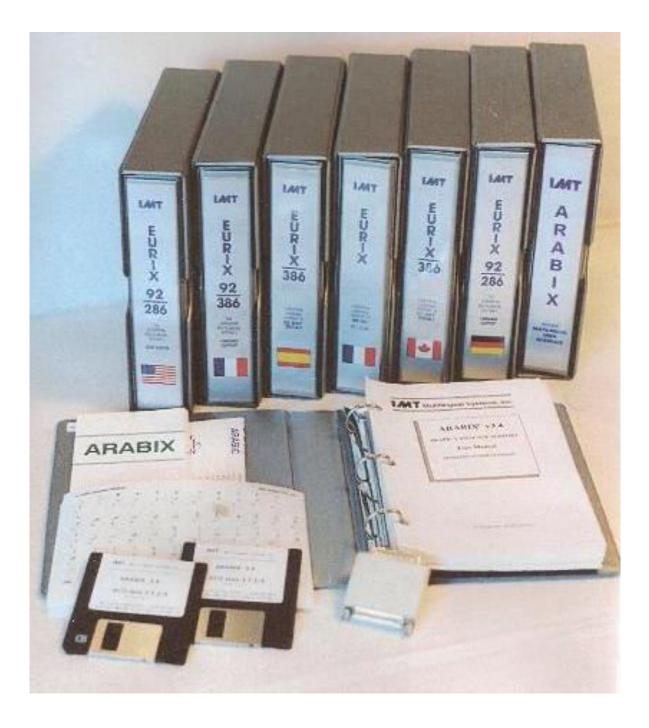
Mr. Ray Kasbarian Mr. Elis Galimidi Mr. Gene Sheninger for their valuable consultations for preparation of the whole programme

From Kuwait:

Mr. Mansour Al Moussa Ms. Afaf Kayed Ms. Lucia Topalian

who spared no effort to make this conference a success.





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