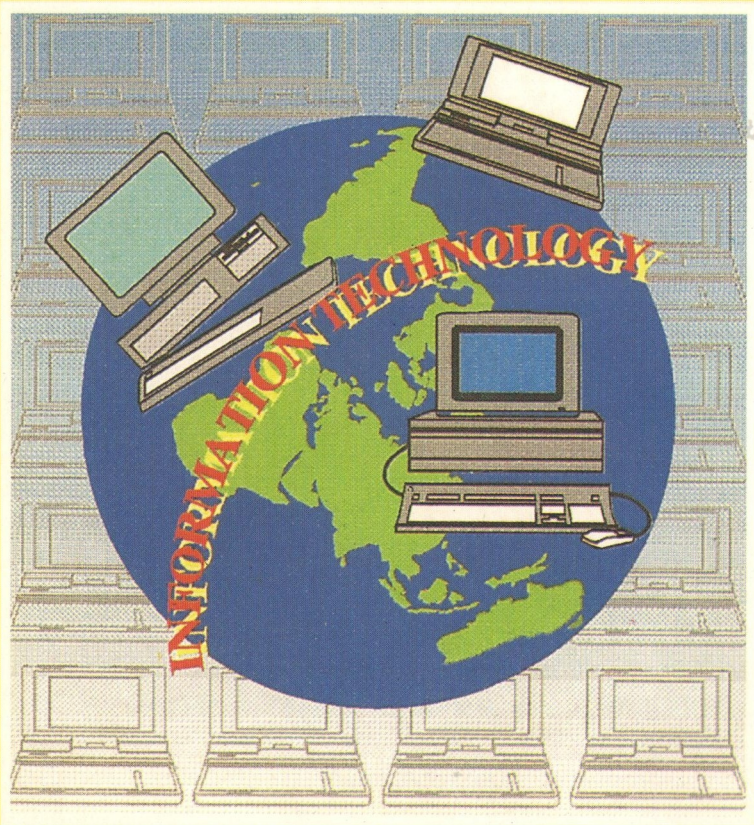


PLANNING MALAYSIA

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EDITORIAL

This is the second issue in the year during the 1996 year. In this present issues, the editorial board has gone through almost a total change in the board membership. This is mainly due to a major reshuffling of staff involving the former editorial board members. The retirement of our Advisor Mr. Ho Khong Ming and the transfer of our Chief Editor Mr. Kamalruddin Shamsudin who is now the Director of Trengganu State Town and Country Planning Department. We would like to welcome our new Advisor Tuan Hj. Abd. Mutallib bin Jelani the Deputy Director General(Management), Federal Department of Town and Country Planning and a new member Cik Norasiah Bee binti Mohd. Haniff.

The present Editorial Board would like to thank all those who have contributed in getting this issue published. A special thanks to the former Chief Editor who has tirelessly gone through every article in the previous issues and set a certain standard for the posterial. The present editorial committee understands that it is still tougher to keep it going under the present fast pace of change. A lot of sacrifices in terms of time and effort is needed to ensure that we have enough articles and more is needed to maintain a good standard. We therefore welcome any comment, contribution in terms of articles for the improvement of our future issues. Last but not least the editorial committee would like to thank the team in Research and Development Unit and all those concerned in compiling, typesetting and designing the cover of this present issue.

Thank you

Editorial Board
Planning Malaysia
October 1996

PERANCANGAN BANDAR DALAM INTERNET: SATU TINJAUAN

Oleh
Hj. Mokhtar Bin Haji Samadi

SYNOPSIS :

URBAN PLANNING IN THE INTERNET : AN APPRAISAL

The advent of the Internet is closely related to the development of information technology. In a nutshell, the Internet's a world-wide computer network which provides information to as well as a means of communication amongst its users via an "Information Superhighway".

In Malaysia, access to the Internet is facilitated by two main agencies, i.e. Malaysian Institute of Microelectronics systems(MIMOS) and Syarikat Telekom Malaysia Berhad(STMB) through a network called JARING(Joint Advanced Research Intergrated Networking). Most of the largertowns are already equipped with appropriate infrastructure to facilititate currently stands at 22 000 an if present trends continue, it is expected to increase to 264 000 by year 2000.

In recent years, the Internet has found its way into the town planning community world-wide. It has now presented itself not only as an important source of planning information, but also as an avenue through which discussions, research and development control are channelled.

The most important potential in which the Internet holds for town and country planning is in making the "distance factor irrelevant". The technology's capabilities in allowing the sharing of information and issued and in enabling communication between both professionals and non-professionals in this field irrespective of their locations presents an enormous contribution towards establishing a much more close-unit and well-informed town planning community. In the long run, this would be most beneficial to the planning profession.

PENGENALAN

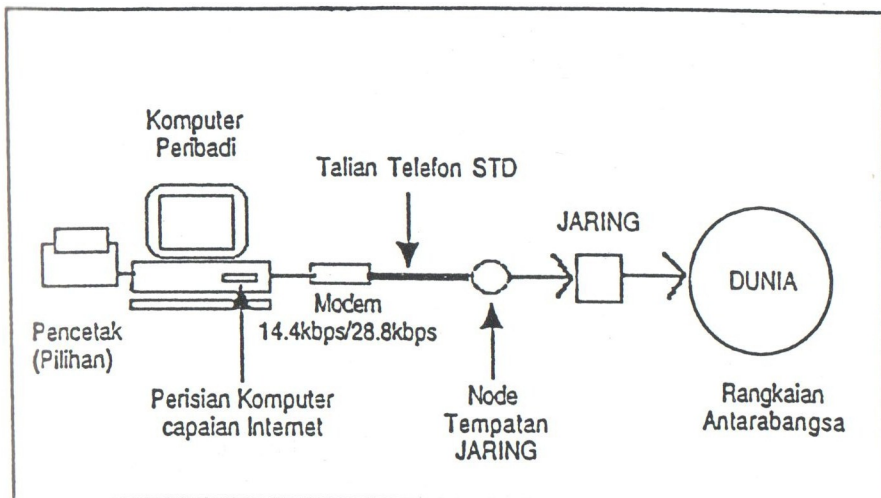
Kemunculan Internet mempunyai kaitan yang rapat dengan perkembangan teknologi maklumat(IT). Internet boleh dilihat sebagai suatu rangkaian komputer atau "computer network" yang menyediakan alat komunikasi di antara unit-unit komputer. Unit-unit ini disambungkan di serata dunia melalui rangkaian pengkalan data yang dipanggil lebuh raya maklumat atau Information *Superhighway*. Internet sentiasa berkembang dengan luas dan cepat, sebagai *global digital library* yang diwujudkan melalui teknologi komunikasi yang *flexible*. Internet menyediakan maklumat bukan sahaja berasaskan paparan teks malahan telah dikembangkan sehingga berupaya untuk memaparkan maklumat grafik, imej gambarfoto, video dan audio. Oleh yang demikian, Internet kini menjadi salah satu sumber saluran maklumat yang terpenting serta alat komunikasi paling berkesan dan pantas di dalam penyebaran maklumat.

SISTEM INTERNET DAN PERKEMBANGANNYA

Di Malaysia penyediaan perkhidmatan Internet yang mengawal laluan Lebuh raya Maklumat Negara ialah Institut Sistem Mikroelektronik Malaysia(MIMOS) dan Syarikat Telekom Malaysia Berhad(STMB) melalui rangkaian yang dikenali sebagai JARING(Joint Advanced Research Integrated Networking). Untuk tujuan ini, pengguna Internet perlu menjadi ahli JARING bagi menyambungkan komputer peribadi ke rangkaian antarabangsa. Pada masakini boleh dikatakan sebahagian besar bandar utama di Malaysia telah dilengkapi dengan infrastruktur Internet dengan mengadakan nod tempatan JARING. Dengan adanya nod tempatan ini, pengguna-pengguna Internet akan menikmati kadar bayaran panggilan tempatan. Langkah ini juga adalah selaras dengan hasrat kerajaan untuk mewujudkan masyarakat bermaklumat(Information-based Society). Sehingga April 1996, keahlian JARING mencapai angka 20 000 dan dengan jumlah kira-kira 60 000 pengguna. Sekiranya trend ini

berterusan menjelang tahun 2000, keahlian ini dijangka akan mencapai ke angka 264 000.

Rajah 1: Sistem Komputer dan Internet



Sumber : Kajian Pengkaji

SUMBANGAN INTERNET KEPADA BIDANG PERANCANGAN BANDAR

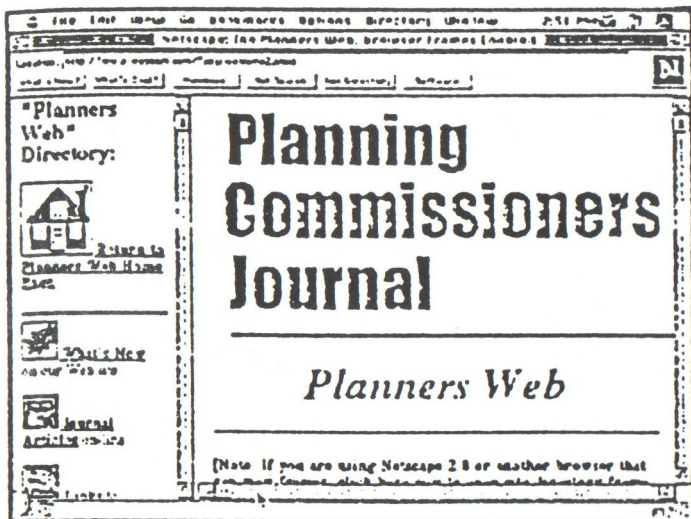
Dalam konteks Perancangan Bandar dan Desa, Internet dikatakan telah mewujudkan suatu pengkalan data dan maklumat perancangan baru, sebagai forum diskusi, meningkatkan penyertaan awam dan menyampaikan berita-berita perancangan semasa secara global melawati batas sempadan sesebuah negara. Segala maklumat perancangan ini boleh dikongsi bersama oleh para Jururancang Bandar, profesional-profesional lain atau pihak awam di seluruh dunia. Pada keseluruhannya Internet boleh memberi sumbangan yang positif kepada bidang Perancangan bandar dan Desa. Antara sumbangan yang dikenalpasti adalah seperti berikut:

INTERNET SEBAGAI PENGKALAN DATA PERANCANGAN

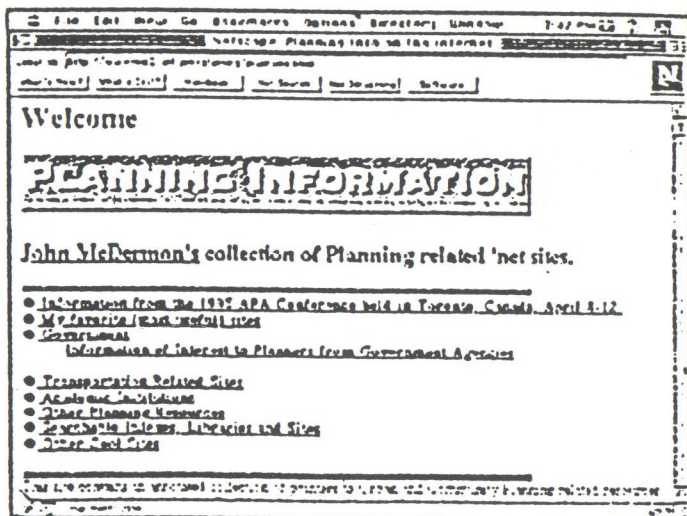
Sumbangan Internet yang penting kepada bidang perancangan bandar ialah mewujudkan pengkalan data terkini secara *on-line* ke seluruh dunia melalui rangkaian *Information Superhighway*. Internet telah menyediakan pengkalan data baru berkaitan dengan Perancangan Bandar dan Desa semasa dari mana-mana negara. Sumber maklumat ini sentiasa dikemaskini dengan gambaran-gambaran terbaru serta sentiasa bertambah dan berkembang dari masa ke semasa apabila tapak web baru diwujudkan.

Rajah 2: Homepage Utama bagi Planner Web Directory, Planning Information, Planning Resource On The Internet and Online Planning.

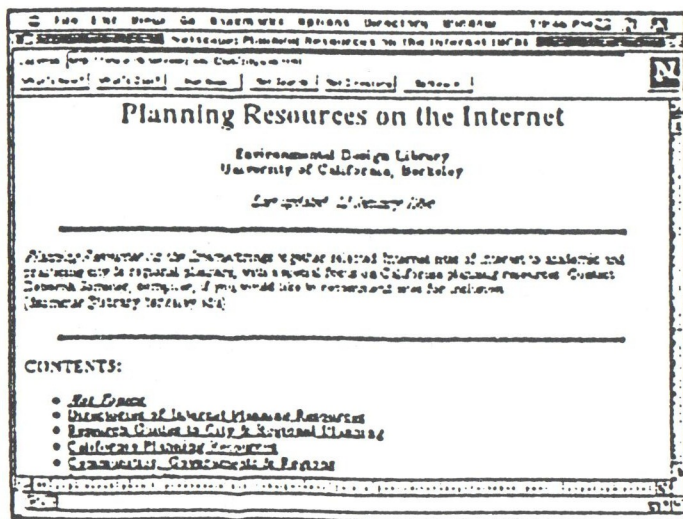
i.



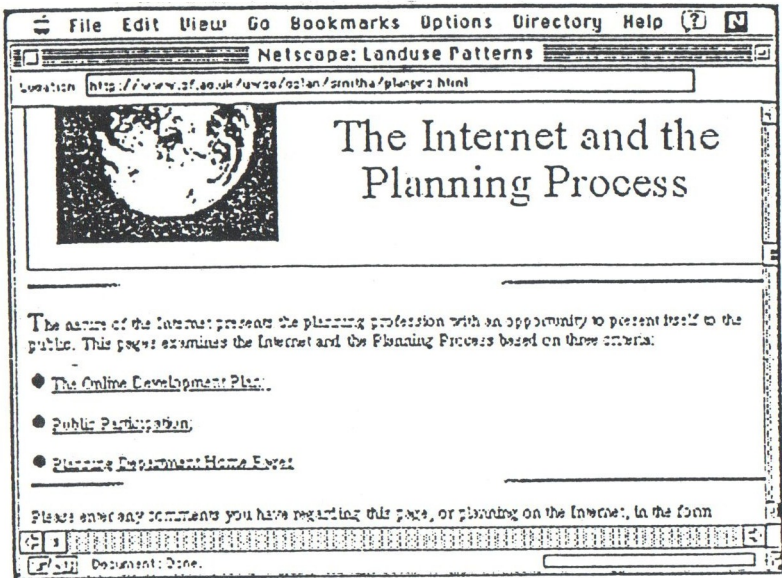
ii.



iii.



iv.



Sumber : Internet

Kajian secara rambang melalui pencairan subjek secara automatik menunjukkan sehingga pertengahan Mei 1996 sahaja, terdapat 434 homepage utama yang melibatkan rangkaian tapak-tapak web berkaitan dengan bidang perancangan bandar dan desa. Statistik ini hanya meliputi 4 subjek utama sahaja iaitu Regional Planning, Town Planning, Urban Planning dan Rural/Village Planning (rujuk Jadual 1).

Jadual 1: Bilangan Tapak Web/Homepage Utama Berkaitan Bidang Perancangan Bandar dan Desa(Sehingga Pertengahan Mei 1996)

Subjek	Bil. Tapak Web/Homepage Utama	%
Regional Planning	340	78.3
Town Planning	9	2.1
Urban Planning	83	19.1
Rural/Village Planning	2	0.5
Jumlah	434	100.00

Nota : Terdapat juga tapak web yang tidak berkaitan dengan perancangan bandar tetapi menggunakan gabungan dua tajuk di atas.

Sumber: Internet: Search Engine melalui tapak web Yahoo di alamat <http://www.yahoo.com/>

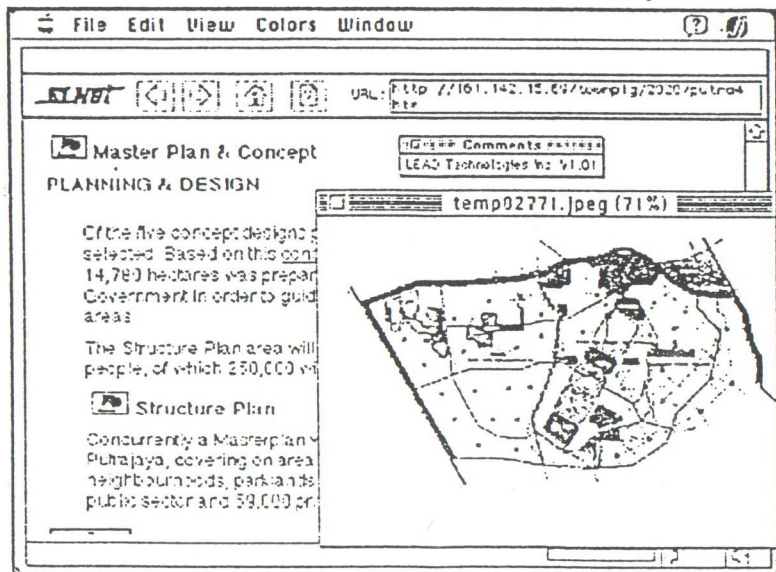
INTERNET MENYAMPAIKAN MAKLUMAT DAN BERITA PERANCANGAN

Maklumat dan berita berkenaan dengan perancangan semasa yang penting seharusnya disampaikan kepada pihak awam bagi menggalakkan pendedahan aktiviti perancangan kepada masyarakat. Sebagai contoh, Perancangan Bandar Bistari iaitu Bandar Putrajaya yang akan menjadi Pusat Pentadbiran Kerajaan Malaysia yang baru dan konsep Perancangan Eco-Media City 2020 yang dikemukakan oleh Dr. Kurokawa boleh diketahui seperti yang ditunjukkan di Rajah 3

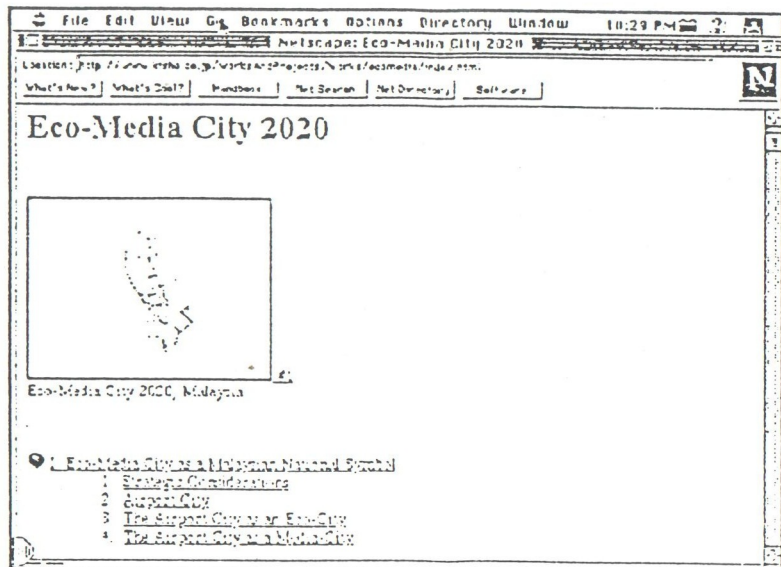
Selain itu beberapa ide baru perancangan bandar masa hadapan dapat diketengahkan seperti konsep *Soft City* yang terdapat di tapak http://www.mit.press.mit.edu/80/-City_of_Bits/. Konsep baru ini

Rajah 3: Homepage Berkaitan Perancangan Bandar Pentadbiran Putrajaya dan Eco-Media City 2020

i.



ii.

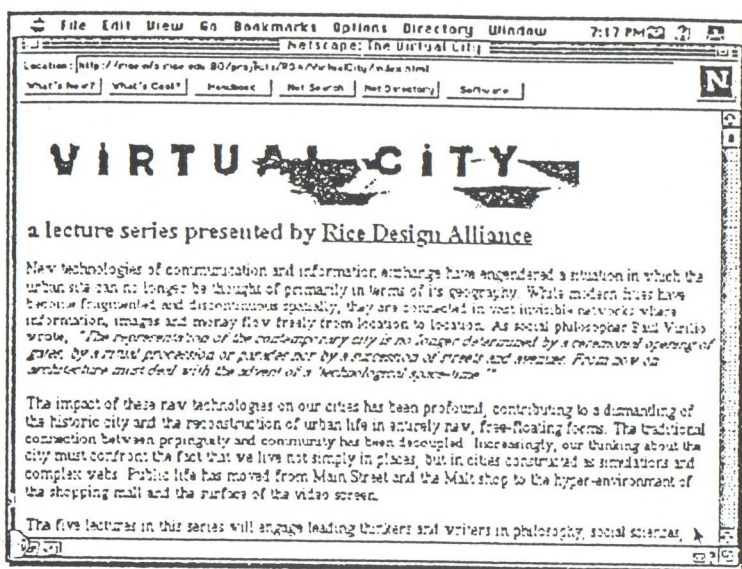


Sumber : Internet

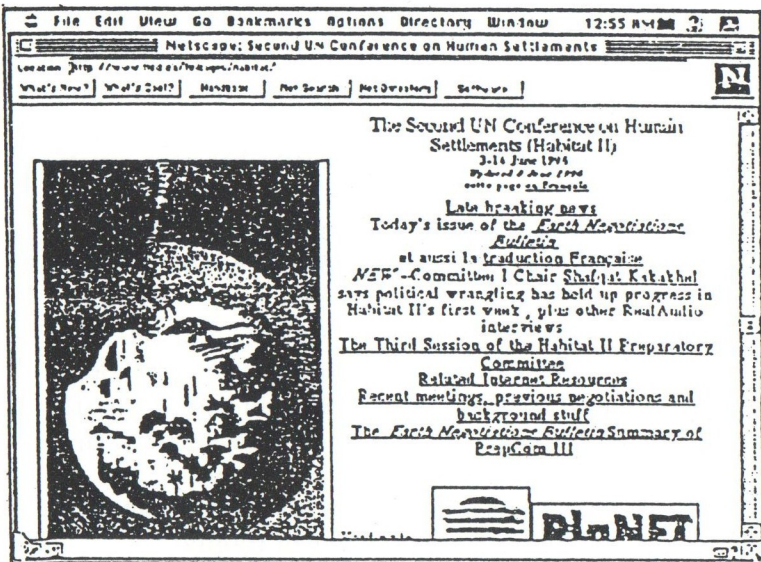
memperlihatkan bagaimana rangkaian komputer dapat bertindak sebagai satu sistem perhubungan yang utama dalam kehidupan dimasa hadapan. Mengikut pakar teknologi maklumat, pada masa tersebut ruang ingatan (computer memory) dan skrin komputer akan menjadi amat penting. Selain daripada itu beberapa siri syarahan berkaitan ide baru perancangan bandar masa hadapan seperti *The Virtual City* yang diusahakan oleh Rice Design di tapak kecil <http://riceinfo.rice.edu:80/projects/RDA/VirtualCity/Index.html>. Persidangan Habitat 2 yang diadakan baru-baru ini di Istanbul, Turki, boleh dilawati di tapak <http://www.iisd.ca/linkages/habitat/> (rujuk Rajah 4). Berita-berita berkenaan dengan persidangan, seminar atau bengkel antarabangsa, dapat disampaikan dengan lebih cepat dan berkesan melalui Internet.

Rajah 4: Homepage Berkaitan Ide Baru Perancangan Bandar dan Persidangan Habitat 2

i.



ii.



Sumber: Internet.

Sebagai contoh, Persidangan *Megacities : Sustainable Chaos* yang dianjurkan oleh *International Academy of Architecture (IAA)* boleh didapati di alamat <http://valley.interact.-nl/megacities>.

INTERNET SEBAGAI FORUM DISKUSI PERANCANGAN

Perkembangan dunia perancangan yang sentiasa berubah memerlukan perbincangan dan pertukaran pandangan khususnya bagi Jururancang Bandar, di mana-mana mereka berada tanpa melibatkan perbincangan formal. Forum ini dapat dikendalikan melalui kemudahan E-mail. Sehingga kini terdapat tidak kurang daripada 27 kumpulan diskusi perancangan yang telah diwujudkan secara E-mail (rujuk Jadual 2). Antara contoh kumpulan diskusi perancangan ialah *PAIRC Live Chat*, *Planning Forum*, *The Graffiti*

Wall dan yang terbaru ialah *Planning Peeves* (rujuk Rajah 5). Kumpulan diskusi ini dapat di "access" melalui tapak web PAIRC. Sebagai contoh, satu forum bertujuan untuk membincangkan aspek perancangan bandar tahun 2010 dan implikasinya kepada polisi perancangan, rekabentuk bandar dan teknologi maklumat boleh diikuti di alamat <http://www.cad9.cadlab.umanitoba.ca/jill/up2010.html>.

Jadual 2 : Senarai Kumpulan Diskusi Perancangan Dalam Internet

Senarai Nama	Alamat 'Subscription'	Topik Perbincangan
cd4urban	listproc @ u.washington.edu	Urban Community Development
ced-net	majordomo @ sfu.ca	Community Economic Development
Calapa-11 cerro-11	calapa-l-request @ rain.org aeam.bitnet, irlearn.ucn.ie	California Chapter APA Central Europe and Regional Research
coastgis cplfyi-l	asuacad.citnet auvm.bitnet, auvm.american.edu	Coastal GIS Council Librarians
devel-l	auvm.bitnet, auvm.american.edu	Technology Transfer in International Development
h-urban* interplanbulletin	uicvm.bitnet, uicvm.uic.edu uicvm.bitnet, uicvm.uic.edu	Urban History American Planning Association International Division
pubadm-l pubpol-l	interplan @ aol.com uminnl.bitnet, vm1.spcs.umn.edu	Public Administration Public Policy
regsc-l	wvnvm.bitnet, wvnvm.wvnet.edu	Regional Science
replan	replan @ uts.edu.au	Network for Australian Schools of Planning
ruraldev	ksuvm.bitnet, ksuvm.ksu.edu	Community and Rural Economic Development

sos-data*	unc.edu	Social Science Data
space-l	wvnm.bitnet,wvnm.wv-net.edu	Spatial Data
srsa-l	wvnm.bitnet,wvnm.wvnet.edu	Southern Regional Science Association
sustainable development	majordomo @ civic.net	Sustainable Development
transit-village	listproc @ ced.berkeley.edu	National Transit Access Center
urban-l	trearnpc.ege.edu.tr	
urban-regional-planning	mailbase @ bailbase.ac.uk	Urban Planning
Urban-Research-L	use +join+in message, not +subscribe+	Recent Urban and Regional Problems
urbanet*	majordomo @ coombs.anu.edu.au	Urban Research
	msu.bitnet,msu.edu	Urban Regional Students
URBAREG	listserv @ uquebec.ca	Urban Regional Planning
URBGEOG	listserv	Urban Geography
URBWLF-L	listserv.arizona.edu	Urban Studies
westplan	listserv @uriacc.uri.edu	Western Planner Journal
	majordomo @csn.org	

Sumber : *Chuck Hostovsky* dalam *Plan Canada* 1996

4. Internet Memperkenalkan Organisasi Perancangan

Melalui Internet kita dapat meninjau bagaimana organisasi perancangan bandar dapat memainkan peranannya dalam memberikan perkhidmatan perancangan sebagai rujukan dan panduan kepada Jururancang Bandar yang terlibat di sektor awam. Satu contoh yang boleh dilihat ialah ditapak <http://www.ci.houston.tx.us/departments/planning.html>. yang menyediakan homepage berkenaan Planning and Development Department, City Of Houston dan homepage bagi North Wiltshire District Planning(Rujuk Rajah 6). Maklumat-maklumat-maklumat terkini hasil perkembangan teknologi komputer yang diperolehi, meliputi aspek-aspek seperti Neighbourhood Planning, Long-Range Planning, Electronic Plan Submittal, Planning Project dan lain-lain.

Rajah 5: Homepage Berkenaan Dengan Diskusi Perancangan

i.

File Edit View Go Bookmarks Options Directory Window 9:25 PM

Netscape: [UB PAIRC] Planning Forum

Location: <http://www.arch.buffa.edu/arc/arcboard/planning.html>

What's New? What's Cool? Main Page Not Search Not Directory Software

Planning Forum

The Planning Forum is a bulletin board for the discussion of topics related to urban/town and regional planning issues.

[Post a message to the Planning Forum](#)

[PAIRC Forum FAQ](#)

Current messages

Click on the message title to read or respond to the message.

- [What is an overlapping "ELI" - Bill Meyer 11/11/99 5:21:48\(0\)](#)
- [Single-access subdivision - Bill Davis 09/09/97 5:13:58\(0\)](#)
- [Planning Education - Steve 11/11/99 5:13:58\(0\)](#)
- [Tell me how to protest a tidal marsh! - Mary Robertson, Regional Planner, Stratford Regional Planning Commission 11/11/99 5:13:58\(1\)](#)

ii.

File Edit View Go Bookmarks Options Directory Window 9:26 PM

Netscape: Islamic urban design

Location: <http://www.arch.buffa.edu/arc/arcboard/messages/planning/6.html>

What's New? What's Cool? Main Page Not Search Not Directory Software

Islamic urban design

[Responses] [Post response] [PAIRC Planning forum]

Posted by John Lockerbie on March 25, 1995 at 23:22:11

I am looking for information on the manner in which Islamic urban design developed and can be viewed, compared with Western urban design. Does anybody have any leads please?

Responses:

- [Re: Islamic urban design Rhonda Fellers 05/25/99 4:21:46\(1\)](#)
 - [Re: Islamic urban design John Lockerbie 05/25/99 4:21:46\(0\)](#)
- [Re: Islamic urban design David March 06/24/99 4:21:46\(1\)](#)
 - [Re: Islamic urban design John Lockerbie 06/24/99 4:21:46\(0\)](#)

[Post a response](#)

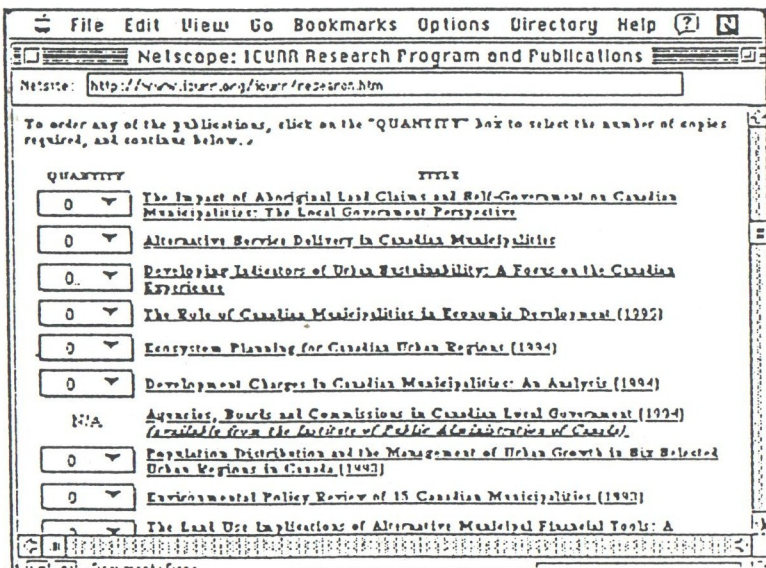
Sumber: Internet

INTERNET MEMBANTU PENYELIDIKAN DAN PEMBANGUNAN(R&D)

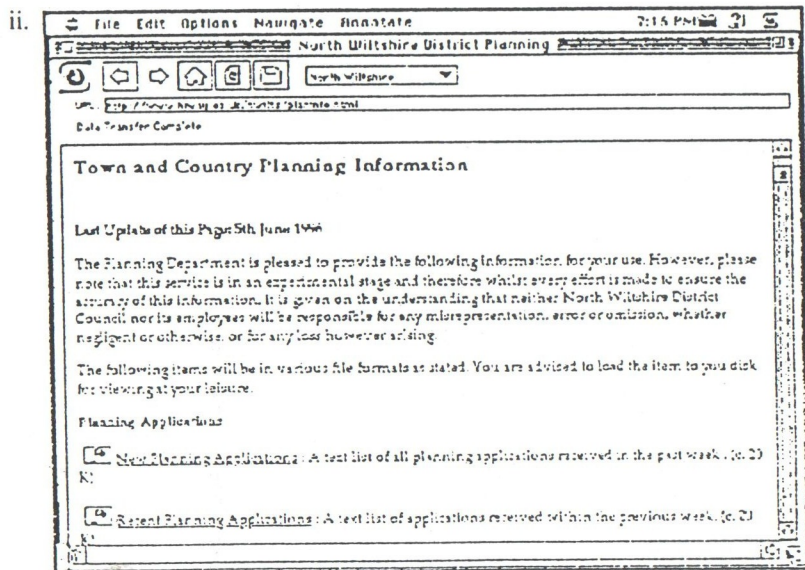
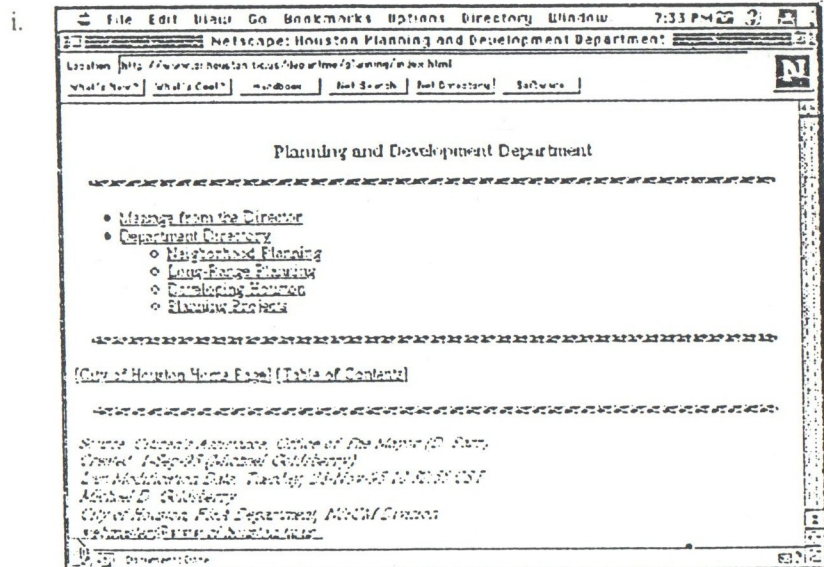
Bagi yang meminati bidang R&D tidaklah menjadi suatu yang sukar untuk mendapatkan maklumat penyelidikan dalam bentuk artikel, kertas kerja, laporan atau buku(rujuk Rajah 7). Bahan-bahan penyelidikan berkaitan bidang perancangan boleh didapati daripada institusi-institusi atau pengajian di luar negara, yang mana boleh disalin dan dipindahkan untuk rujukan. Boleh dikatakan sebahagian besar institusi pengajian tinggi yang menawarkan kursus berkaitan bidang Perancangan Bandar dan Institusi Perancangan boleh di 'access' melalui Internet. Satu contoh artikel yang berkaitan dengan teknologi Telekomunikasi dan kesannya kepada gunatanah boleh diperolehi di tapak web Planning Commissioners Journal dengan menggunakan alamat <http://www.webcom.com/pcj/it-nf/itn-open.html>. Himpunan beberapa artikel berkenaan dengan tajuk

Rajah 7: Homepage Yang Menyediakan Artikel-Artikel Berkaitan Perancangan

i.



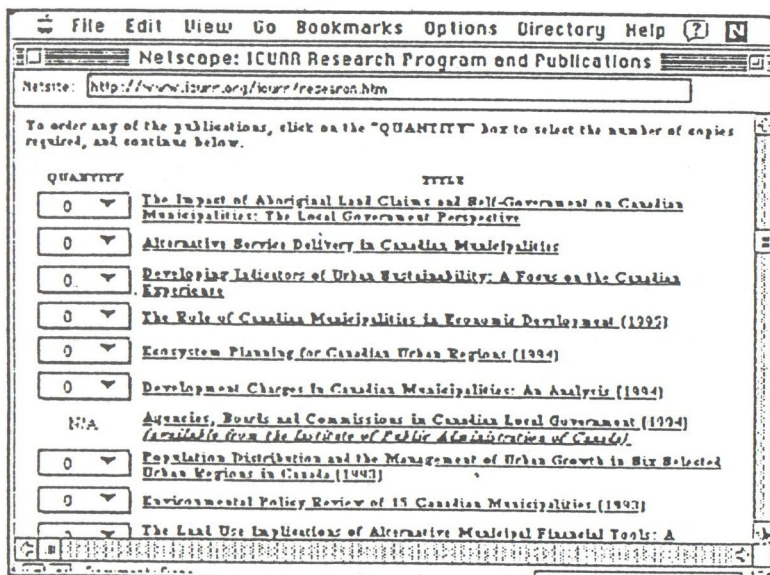
Rajah 6 : Homepage Organisasi Perancangan di Sektor Awam



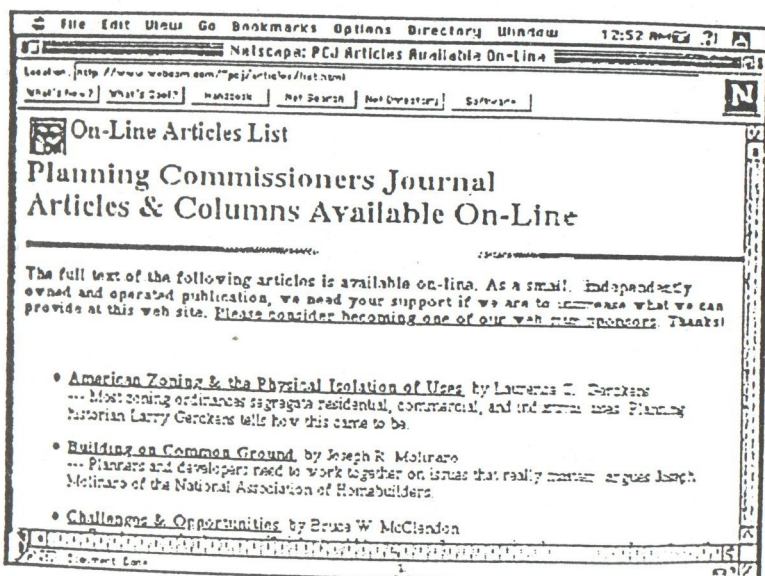
Sumber : Internet

Rajah 7: Homepage Yang Menyediakan Artikel-Artikel Berkaitan Perancangan

i.



ii.



Sumber : Internet

the Technological Reshaping of Metropolitan America pula boleh diperolehi di alamat <http://www.wws.princeton-.edu/ota/-disk1/1995/9508/9508-n.html>.

Dengan proses keputusan perancangan yang bertambah kompleks pada masakini, peranan Jururancang Bandar bertambah penting dan kian mencabar, terutamanya untuk mendapat dan menganalisis maklumat yang banyak. Walau bagaimanapun program GIS(Geographic Information System) akan mempercepatkan keputusan perancangan ini. Selaras dengan itu, applikasi GIS dan kaitannya dengan perancangan boleh diterokai dimana-mana pusat GIS. Mengikut koleksi yang disediakan oleh PAIRC, sehingga 6 Jun 1996, terdapat tidak kurang daripada 63 tapak web berkaitan GIS. Antara tapak-tapak web yang boleh diterokai dalam aspek ini dapat dilihat di Jadual 3.

Jadual 3 : Antara Tapak-tapak Web Yang Menyediakan Maklumat GIS

Nama Tapak Web	Alamat/Lokasi URL
Australian GIS	http://life.anu.edu.au/demos/akclis.html
Australian Geological Survey Org.	http://www.agso.gov.au/
Geological Survey Of Japan	http://www.aist.go.jp/71281
GIS Leed University	http://www.geog.leed.ac./linc/geog.html
Geomatics Canada	http://www.ccrs.emr.ca/linc/index.html
Geoweb Project	http://wings.buffalo.edu/geoweb/
Hongkong Geographic Resource Centre	http://geog.hkbu.edu.hk/
Image Net	http://www.coresw.com
US Geological Survey	http://www.usgs.gov/USGSHome.html
Index Of GIS Related Sites	http://www.io.com/~frank/gis.html

Sumber : Internet

INTERNET MEMBANTU PENYERTAAN AWAM DALAM KAJIAN RANCANGAN PEMBANGUNAN

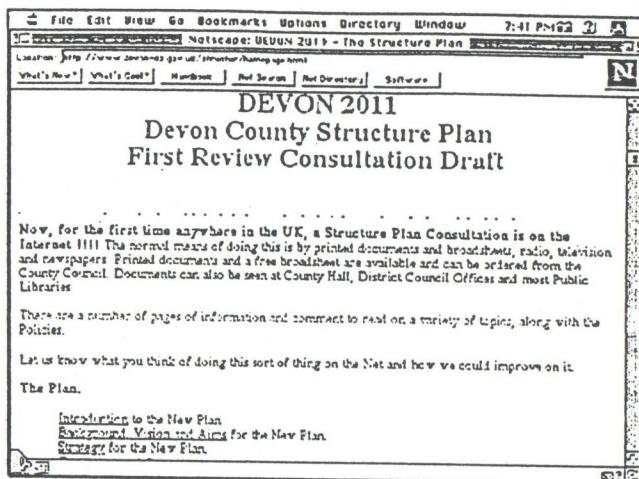
Internet juga telah membuka pendekatan baru dalam aspek penyertaan awam yang mana merupakan suatu yang penting di dalam memastikan Rancangan Pembangunan yang disediakan diterima oleh pihak awam. Selaras dengan ini, Pihak Berkuasa Tempatan di United Kingdom(UK) langkah dengan menafaatkan Internet untuk menyalurkan dokumen Draf Kajian Semula Rancangan Struktur(RS), untuk mendapatkan maklumbalas daripada pihak awam di seluruh dunia(rujuk Jadual 4). Antaranya ialah dokumen RS bagi *Devon Country* yang mengutarakan cadangan-cadangan dan polisi-polisi untuk diteliti secara "on-line" tanpa mengunjungi tempat pameran atau menyemak di pejabat berkenaan(rujuk Rajah 8). Di samping itu pembelian laporan dan dokumen-dokumen sokongan boleh dibuat melalui e-mail dengan menggunakan borang pesanan. Bagi Rancangan Tempatan, di antara contoh homepage yang boleh diterokai ialah Wansbeck District Local Plan di alamat <http://www.wace.co.uk/CityCard/htmldocs/locauth/localpl.html> dan *surrey Waste Local Plan 1995* di alamat <http://www.surreycc.gov.uk/scc/waste/wastel.html> (rujuk Rajah 9).

Jadual 4 : Beberapa Tapak Web Berkaitan Rancangan Struktur

Tapak Web	Alamat/Lokasi URL
Devon Country Structure Plan	http://www.pin.org/~pin/library/unplanning.html
Surveyy Structure Plan.	http://www.cc.gov.uk/scc/waste/w/pappxl.html
Cheshire County Structure Plan	http://www.u-net.com/cheshpin/c-2011/strplan/-home.html
Greenhithe Structure Plan	http://www.archpropplan.auckland...g/projects/Gh-structPlan.html
County Council and District Council Planning Policies For Coast	http://www.plg.hw.ac.uk/~nigel/ala.html

Sumber : Internet

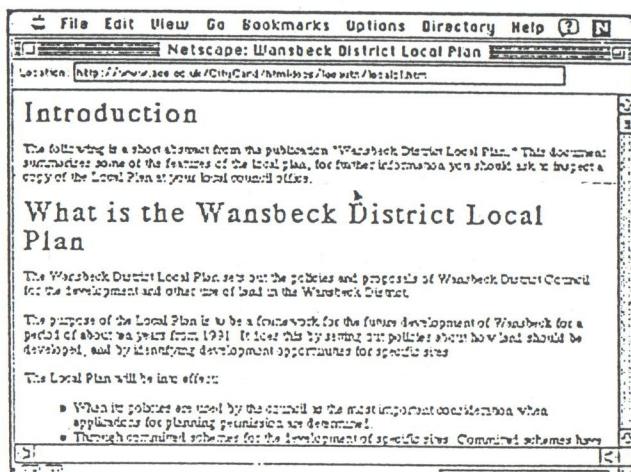
Rajah 8 : Homepage Rancangan Struktur Devon Country, UK



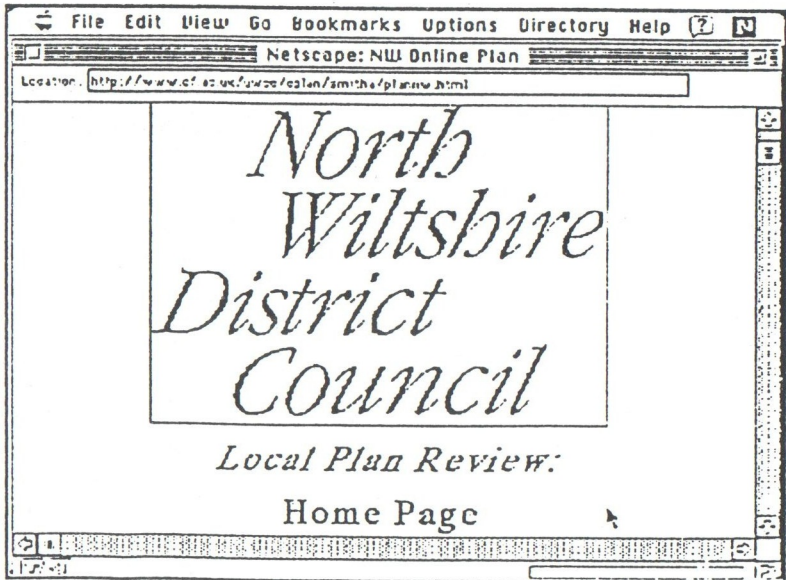
Sumber : Internet

Rajah 9 : Contoh Homepage Utama Berkaitan Rancangan Tempatan

i.



ii.



Sumber : Internet

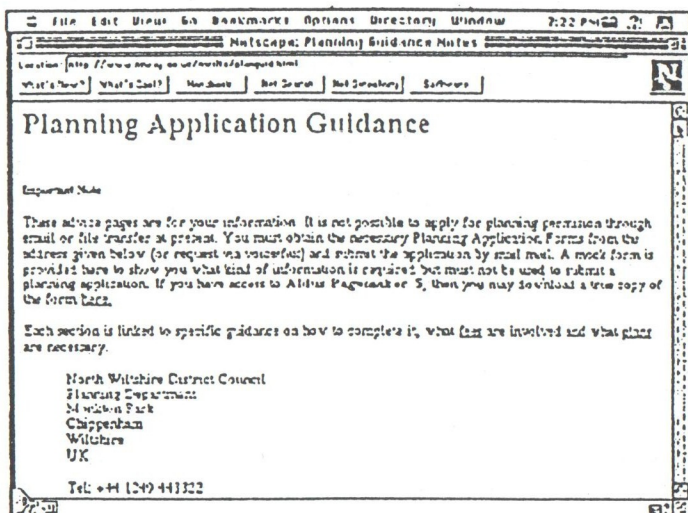
INTERNET MEMBANTU KERJA-KERJA PENGAWALAN PEMBANGUNAN

Aspek kawalan pembangunan adalah merupakan salah satu peranan penting Pihak Berkuasa Tempatan bagi memastikan pembangunan yang dicadangkan selari dengan Rancangan Pembangunan yang diwartakan. Beberapa Pihak Berkuasa Tempatan di UK telah mula menggalakkan pihak awam menyemak proses dan garis panduan permohonan perancangan melalui Internet(rujuk Rajah 10). Dengan mengetahui kedudukan permohonan perancangan melalui Internet, pihak awam yang berkepentingan boleh meneliti dan mengemukakan bantahan ke atas sesuatu permohonan perancangan. Melalui pendekatan ini permohonan perancangan serta proses kelulusan akan menjadi lebih mudah, cepat dan secara tidak

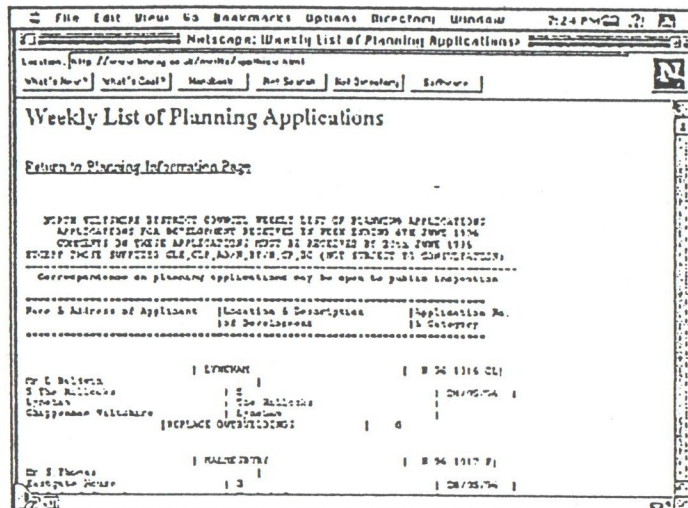
langsung akan dapat menggalakkan pembangunan di sesuatu kawasan.

Rajah 10 : Contoh Homepage Berkaitan Permohonan Perancangan

i.



ii.



Sumber : Internet

KESIMPULAN

Kemajuan teknologi maklumat dan pengenalan komputer peribadi memberi ruang baru kepada sistem perancangan untuk menggunakan teknologi tersebut sebagai alat yang berkeupayaan untuk memandu perancangan dan pembangunan di masa hadapan. Internet telah menyediakan "access" baru yang amat penting kepada Jururancang Bandar untuk menerokai pengkalan data perancangan yang terdapat dalam *Information Superhighway*. Internet bukan sahaja menyediakan bahan-bahan maklumat perancangan dari serata dunia tetapi ianya menyediakan ruang forum diskusi untuk bertukar-tukar pandangan di antara Jururancang Bandar dan lain-lain professional di mana sahaja mereka berada. Internet juga dapat merapatkan dan memudahkan komunikasi di antara Jururancang Bandar di sektor awam dan swasta di dalam satu komuniti global ke arah meningkatkan profesionalisme perancangan.

Internet juga membukakan peluang baru kepada Jururancang Bandar memperoleh teknologi maklumat melalui konsep-konsep perancangan baru masa hadapan seperti Bandar *Cyberspace*, *Cybercity* atau *Virtual City*. Bandar-bandar ini wujud dalam kerangka yang tidak mempunyai dimensi fizikal tetapi memperlihatkan ciri-ciri ruang bandar dalam alam *Cyberspace*. Dalam hal ini Internet telah membentuk satu ruang baru(*cyberspace*) di mana isu-isu perancangan adalah berbeza. Ini di antara perkara baru yang terdapat dalam Internet. Oleh itu sama-samalah kita menerokai dan menafaatkan Internet selari dengan perkembangan teknologi maklumat yang sentiasa berubah demi meningkatkan lagi bidang perancangan bandar dan desa yang kita jalankan.

Rujukan:

1. Comer, Douglas (1995): The Internet Book: Everything You Need To Know About Computer Networking and How The Internet Works. Prentice-hall, Inc.
2. Charles Hostovsky (1996), Planning In Cyberspace. You Will Be Assimilated..MCIP.Article For January 1996 Plan Canada.
3. Stuart Harris, Gayle Kidder (1995): Netscape - Quick Tour .,Ventana Press.
4. Majalah : Computimes Shopper, Malaysia. April 1996.
5. Bahan-bahan dari Internet yang diperolehi dari Tapak-tapak Web berkaitan dengan Perancangan Bandar di United Kingdom, United State, Australia, New Zealand dan Lain-lain.

Contributor's Biography

Haji Mokhtar bin Haji Samadi is a graduate of Universiti Teknologi Malaysia. He has served 10 years with the department, having served the special planning Unit of Lembaga Kemajuan Wilayah Jengka, the Structure Planning Unit of Machang and Pasir Mas. Presently he is with the Structure Planning Unit of Kuala Krai/Gua Musang in the project office at Kota Bharu, Kelantan. He is also a graduate member of MIP and a member of JARING - since February 1996

CONCEPTS AND IDEAS FOR AN INFORMATION SYSTEM FOR LAND AND DEVELOPMENT(ISLAND)

by

Dr. Lee Lik Meng
Dr. Alias Abdullah

INTRODUCTION

Penang has long played a leading role in the economy of the nation. It has a leading port, it is a major centre for trade, commerce and finance, a tourism magnet, and is the pioneer and catalyst for the industrialisation of Malaysia. As it approaches the 3rd Millennium, it must position itself to be transported into the electronic frontier where government, business, work and lifestyles will be conducted in bits and bytes. Penang is laying the foundation for a community which will be as comfortable and adapt on the information superhighway as they are on Penang Street. The Penang State Government has initiated the proposed hook-up to JARING for all State EXCO Members, the proposed Penang Homepage, and most recently, the proposed establishment of PenangNET. It has also taken steps to create a virtual government linking the various state and local government departments and agencies.

The ISLAND Project will contribute towards the realisation of the IT vision of the Penang Government in two major areas. Firstly, it will develop the necessary **tools for the users** of IT-based services. In so doing, it will generate and drive the **demand** needed to sustain such services.

THE ISLAND PROJECT

The code name ISLAND recognises its origin on the Island of Penang. The acronym which stands for *Information System for*

Land and Development is especially significant as it reflects the development of a computer-based system to facilitate the operations and administration of matters dealing with land and development. Its target clients are departments in the local and state governments but it could eventually become part of the Federal Civil Service Link, creating a virtual government accessible from any part of the world.

It is conceived as an integrated system encompassing the various departments with dealings on land and development. End user applications will be developed in modules specific to the tasks and needs of each department. Common applications and shared data will be accessible through a Wide Area Network (WAN) spanning the two tiers of local and state governments. When implemented, it will become a core application for propelling Penang as the intelligent city of the north.

Initially, a pilot project (see later discussion) for the Department of Planning and Development, Municipal Council of Penang Island (MPPP) will be undertaken to demonstrate the ideas in ISLAND.

The Approach for Development

The approach for the development of ISLAND is to *start from the end-users*, that is, the individuals in the various departments who have to perform the series of inter-connected tasks associated with the control and development of land. This approach recognises that it is the users who drive the demand and are therefore the key to success. Our observation is that an IT-related project will fail if only one or two personnel in the department is involved. To be successful, the project must encourage extensive involvement of all staff (perhaps in stages) focusing on day-to-day office routines and chores. IT must be made relevant and indispensable to the users. The users must choose IT as the preferred mode of work.

The tasks involved for the ISLAND system begins even before a development proposal is received by the local authority and continues even when the buildings have been occupied. Obviously, a comprehensive system which includes every conceivable task will result in a mammoth project requiring huge amounts of financial resources, manpower and time. Such a system can fail for various reasons including the lack of expertise to develop and maintain the complex system, lack of cooperation amongst the players, and most critically, lack of appreciation of the perceived benefits from the project by potential users and the authority or executives in charge of funding.

An *incremental approach* will be taken giving priority to high profile applications identified in conjunction with the user departments. This should not be mistaken as a piecemeal approach because a comprehensive overview will be adopted to ensure that all the modules will eventually be integrated as a seamless application. This approach will :

- a. Recognise the traditional areas of jurisdictions and control - data-sharing is obviously critical but by decentralising authority and control, the individual departments will not feel threatened but will instead be motivated by departmental pride to keep the system up-to-date and operational.
- b. Introduce cost-effective and easy to use applications which exploits the benefits of IT - the system will be developed on desktop technology affordable to all departments with emphasis on a "quickstart" requiring little or no formal training or instructions.
- c. Cultivate the users into the IT mode of carrying out chores - users will come to regard IT as second-nature.

AREAS OF APPLICATION

Each department will actively participate in the identification and

development of applications relevant to their department's responsibilities and job functions. Even though the applications and databases will be *decentralised*, a comprehensive overview will be maintained by paying special attention to :

- a. tasks which involve more than one department - e.g. the task of processing planning permission involves the planning, building, engineering and health departments as well as other external departments.
- b. data required from several departments databases - e.g. the processing of building plan applications requires information on planning permission granted and their attached conditions.

Wherever possible, the flow of work and information will be IT-based, accessible instantaneously over the local area network. However, it is recognised that the practice of data-sharing especially with external departments may require a long period to implement and should therefore be a long-term goal.

Amongst the anticipated areas of applications are :

- i. Matters related to development approval
(*including* - Planning Permission; Building Plan; Engineering Drawing; Business Licensing; Planning Appeal; Enforcement)
- ii. Map updates and production (e.g. maps to show rezoning)
- iii. Statistical report generation (e.g. for annual reports, monitoring, State Assembly questions)
- iv. Forward planning (e.g. structure / local plans in digital format)
- v. Automated Maintenance/Facilities Management (e.g. road maintenance)

- vi. Growth management monitoring
- vii. Property Listing/Valuation
- viii. Land Bank
- ix. Site Selection
- x. On-Line Public Enquiry(e.g. planning enquiry, assessed value)

A comprehensive review and consensus on the list of applications will be achieved through inter-departmental discussions.

INTER-NETWORKING

In implementing the system over a network, each department will have its own server and workgroup(s) connected to the backbone through switched hubs(see figure 1).

There are several advantages to this configuration. Firstly, each department will retain its original functions and responsibilities. They will be responsible for the digital database most associated with their job functions. Secondly, a distributed system will help to reduce congestion on the network and central server since the major applications related to each department will be at the departmental server. Thirdly, the department workgroups can function independently regardless of external conditions. This means that each department can start immediately with small workgroups which will eventually be connected to the organisation's network backbone.

In the case of MPPP, a dual fiber-optic backbone has been installed from the 17th floor of KOMTAR to the 4th floor where the central server is located. The backbone is designed for zero down-time to ensure critical businesses are not interrupted by

network failure. At the moment only the Building Department has a departmental network linked to the backbone but with limited applications. The Valuation Department and the Municipal Secretary's Office are also currently linked to the central server.

For access beyond each local government and between local governments and the state departments, remote access using ISDN dial-up or by leased line access through Penang NET/JARING provides a cost-effective solution. The creation of a high speed link encompassing all government departments in the state can be justified in future when the traffic demand between agencies becomes substantial. The first step towards this is the creation of a fiber-optic infrastructure within KOMTAR itself where most governments are located.

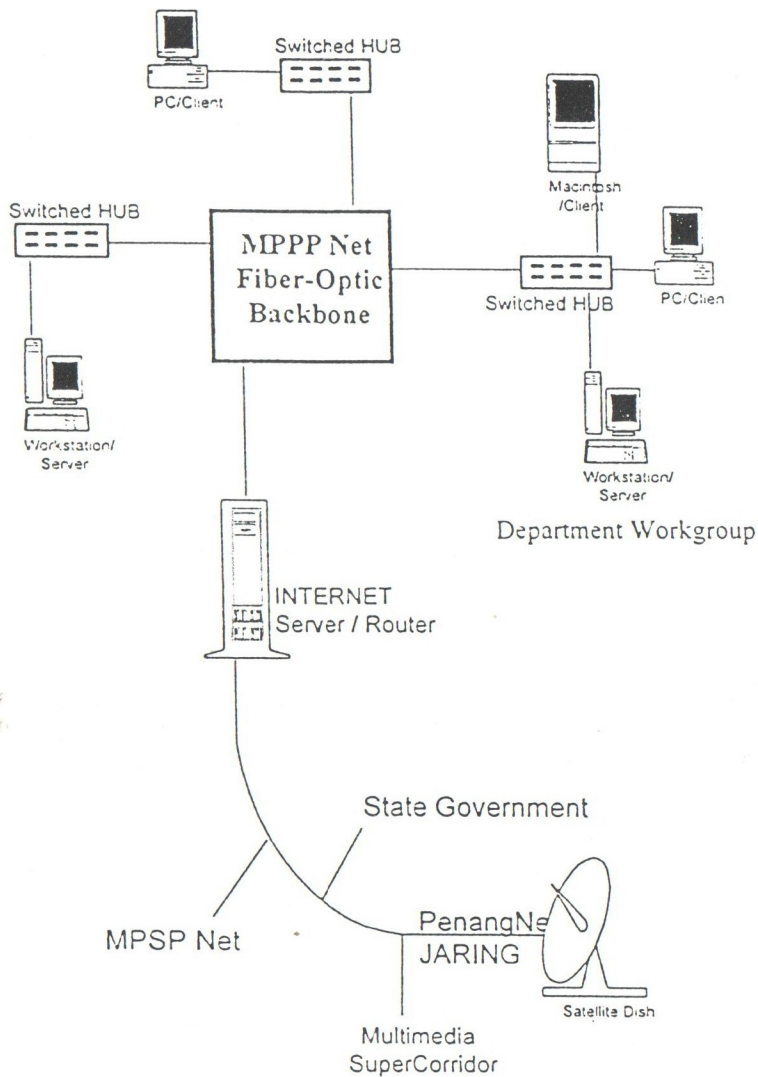
THE DIGITAL DATABASE

For the system to be operational, data must be available in digital format. Basically, digital data will be captured by two principle means:

- a. captured during the carrying out of specific tasks (e.g. type of proposed developments or current owners will be entered into the system at the time of application for approvals).
- b. created through data capture projects to provide the required basis for carrying out the tasks (e.g. council policies, building lines, zoning, etc. will have to be prepared and entered in the database for the system to work).

Land is characterised by location and space. As such, it is imperative that the digital database be developed on a GIS. However, many of the end-user applications can be efficiently

Figure 1 : FRAME WORK FOR INTER-NETWORKING
WITHIN AND BETWEEN ORGANISATIONS



carried out using relational databases with links to the GIS databases wherever necessary.

The digital database will include, amongst others, the following information/data :

- Buildings and structures
- Cadastral base (geometry, administrative area, lot nos.)
- Community and other facilities
- Council policies, guidelines and development plans
- Demographic data (census, surveys)
- Existing land use (remote sensing images)
- Land information (titles, category of land use, ownership)
- Land use zoning
- Social-economic indicators
- Streets network with address range (for geo-referencing and routing)
- Traffic (accidents, traffic volume, terminals, bus routes)
- Urban services
- Utility lines

The creation of these databases may initially have to be contracted to private vendors but in the near future, digital data will be available for purchase. For instance, the Survey and Mapping Department is undertaking the creation of digital topographic maps and cadastral maps using the highly accurate coordinate geometry method of data input. These will be available for sale to the public. Similarly, census data may be available in CD-ROMs or over the Internet. This is already available in the United States of America and some other countries. From the perspective of the state and local governments, the digital data created by these agencies could also be revenue-generating, either through subscription over the Internet or sold in packages.

THE PILOT PROJECT

A pilot project, sponsored by Majlis Perbandaran Pulau Pinang, has been initiated to demonstrate the ideas expressed above. In particular, the pilot project will emphasise the use of IT for day-to-day operations through the development of user-friendly interfaces. This will cut down on time spent learning the application system as well as to instill confidence amongst users who are literally "afraid" of computers. The ultimate objective is to integrate IT into the work culture. The attainment of this work culture will help in the government's objective of achieving ISO 9000 as a measure of efficiency and productivity. The pilot project is expected to take about eight months to complete (June 1996 - January 1997) and the Malaysian planning profession will be kept informed of developments.

For the purposes of this pilot project, two sub-components will be developed:

i. **Planning Enquiry**

To create a GIS-based on-line enquiry system

ii. **Processing of Application for Planning Permission**

To automate the system for processing of approvals

- Automatic extraction of MPPP policies for development
- Registration of applications
- Replies to applicants
- Movement of applications
- Reminders
- Generation of Statistical Reports

Systems Development

A structured approach will be adopted. The development of the applications will be preceded by a *user needs assessment* to identify the tasks, data requirements and output to be generated.

The user needs assessment will form the basis for the design of the application systems. However, a direct migration from the manual method to the IT-based method may not be efficient. In the applications development, attention will be given to :

- eliminating or reducing duplication in data capture
- assigning repetitive or tedious tasks to be undertaken by the system
- achieving greater accuracy in terms of data capture and retrieval
- reducing human errors arising from oversights
- creating innovative approaches towards carrying out the tasks with IT

The *systems design and development* will be PC-based using client/server technology. The technology is cost-effective and easier to manage for the organisation without having to rely heavily on highly trained personnel. This will help to encourage the work culture of using IT throughout the organisation.

Two major types of software will be used. The relational database *Access* (and later *Access95*) will be used to set up the non-spatial databases as well as the human computer interface to perform the day-to-day tasks associated with the two subcomponents described above.

A GIS software, *pc Arc/Info*, will be used to create the spatial database while *ArcView 2* (later *ArcView 3*) will be used to create the user-friendly interface for tasks which requires the spatial capabilities of a GIS.

Two digital databases will be created for the pilot project for the purpose of demonstrating the ideas in the application. They are the geographic files based on cadastral geometry and land use zoning attached as attributes to the cadastral base.

Contributors' Biography

Dr. Lee Lik Meng

Dr. Lee is a corporate member of the Malaysian Institute of Planners. He obtained his Ph. D. in the use of GIS for land use planning from University Washington, Seattle, USA. He teaches computer applications at the School of HBP, USM and was a consultant for data processing to the Royal Commission of Enquiry for Safety in Schools in Malaysia. He has also developed a database application for a user-friendly electronic dictionary, participated in the Arc Macro Language (AML) competition at the Arc/Info Users' Conference (Palms Spring) and is currently the web-master for the Malaysian Town Planning Homepage. He also has considerable experience in town planning practice, initially with a consultant firm and later with the Majlis Perbandaran Pulau Pinang as a town planner in development control.

Dr. Alias Abdullah

Dr. Alias is also a corporate member of the Malaysian Institute of Planners. His planning experience includes service with Majlis Perbandaran Kuantan. He received his Ph. D. from Kumamoto University, Japan in the area of CAD and GIS and is currently consultant for the development of Perak State GIS. He is also the web-master for the HBP Homepage.

RIVERFRONT DEVELOPMENT IN MALAYSIA -ISSUES, AND CHALLENGES(Prospects)

by

DATO' WAN MOHAMAD MUKHTAR BIN MOHD. NOOR

with the assistance of
LIM SIEW CHIN

This articles is extracted from a Seminar paper prepared for an International Seminar on Waterfront and Marina Development in Singapore on Mac 1996, since the issues on flooding, river pollution has gained wide attention lately and at the same time riverfront properties is looked upon as an asset for resort and recreation, it is hoped that this article can further stimulate interest and thinking among planners to intergrate conservation of river in their planning.

BACKGROUND

Rivers are the lifeline of cities. Rivers through settlements are like veins that carry life for sustenance and longevity. Right from ancient civilization, cities have evolved along the coasts and rivers. In Malaysia most of the earliest settlements were founded either at the confluence of rivers or at the river mouths, for example Alor Star, Kuala Lumpur, Kuala Terengganu, Kuala Kangsar, Klang, George Town, Malacca, Muar, Johor Bahru, Sibul and Kuching. These being due to the importance of rivers as a source of water and transportation.

Historically Malaysia lacks a strong tradition in developing riverfronts for public amenity and convenience. Work on rivers were basically related to mitigating floods and protection of riverbanks. Problems resulting from economic activities were observed as early as 1922. It was reported by C.C. Reade, the

Government Town Planner of the Federated Malay States that "tin-mining operations in and around most of the principal towns have produced extraordinary problems. Many of the rivers have silted up their original beds and flooding problems are very severe in places."

It is also fair to comment that the earlier British administrators and officers whilst "conscious in laying out central areas of most towns with liberal provisions for padangs (fields), site for open space about public buildings, Government offices, quarters, etc" had made no discernible focus on the development of the riverfront as a public amenity or for recreation. Planning and civic development relating to riverfront during such early urbanization periods were largely non-existent other than purely engineering solution to mitigating floods or protection of river banks. Development along riverfronts were purely incidental and mainly utilised limited landscaping elements as a means to improve the town environment. This has been a common motive up to the early 90's. To date most projects in this country has been limited to beautification.

This article covers in brief related legislation, main agencies, issues, policies and guidelines on riverfront development in Malaysia. Two contrasting examples of riverfronts development i.e. the Kuching Waterfront project in Sarawak and the SUPERI project in Perak, are explained further to show the fresh and innovative approaches used in the development of these projects.

LEGISLATION GOVERNING RIVERFRONT DEVELOPMENT

Malaysian waters and rivers are covered in various laws and enactments i.e.

- National Land Code 1965
- Water Act 1920(Cap 146)
- Ministerial Function Act 1969

- Local Government Act 1976
- Environmental Quality Order 1987
(Environment Impact Assessment-Prescribed Activities)
- Land Conservation Act 1960
- National Forestry Act 1984(Forestry Rules 1986)
- Mining Enactment 1936(F.M.S. Cap 147)
- Fisheries Act 1963(1985)/Inland Fisheries Act
- Irrigation Areas 1953(1989)
- Drainage Works Act 1954(1988)

Other related legislation include : Water Supply Enactment, Electricity Act (1949), River Right Enactment of Perak(turtle eggs and fish) Kelantan River Traffic Enactment(1955), Federation Malay States River Launches(Cap 177), Pahang River Launches Enactment 6/49, Sarawak Riverine Transport Bill (1993), National Central Sewerage Bill(1993), Uniform Building Bye-laws, 1976.

Obviously that there are more than enough laws and enactments that provide for the use, management and protection of rivers. Despite these there still exists problem and issues. Before touching on the issues and problems, a brief description of relevant government agencies having regards to planning and development of rivers are given in the following paragraph.

AGENCIES GOVERNING RIVERFRONT DEVELOPMENT

The main agencies having regard to the improvement and utilisation of river include the Department of Drainage and Irrigation(DID), Department of Forestry, Department of Environment(DOE), The Local Authorities, and the Department of Fisheries. The Department of Town and Country Planning through its town planning legislature besides laying down comprehensive urban developments policies and strategies also provide physical development guidelines in cooperation with DID.

Department of Drainage and Irrigation

The DID being the custodian of rivers in the country, is responsible for the administration, monitoring, and maintenance of rivers and its banks. These involve in particular, flood mitigation and river conservation guidelines in riverfront development.

Besides existing legislations, efforts are being made to introduce a new legislation to better regulate the management of rivers. This new legislation would cover the categorizing of rivers according to their economic use, classification of water quality and inter-state water transfer.

In East Malaysia there is a River Board with wide ranging powers from the control of jetty point to ensuring safety of river users as well as the power to appoint a Local Authority as the agent to clean up the river.

The Department of Town And Country Planning

The DTCP prepares Structure and Local Plans within the provision of the Town and Country Planning(TCP) Act, 1976(Act 172). The Structure Plan is a comprehensive plan spelling out policies and development strategies for a local Authority's area. These policies cover housing, commercial, industry, agriculture, land use, utility, infrastructure, environment and recreation aspect of development. Local Plans on the other hand, provide more detailed land use plan to facilitate and guide development. Prescribed landuses in cognizance of environment, economic and social considerations are given detailed attention.

Further to this, under the TCP Act(Amendment) 1995, a Development Proposal Report is required to be submitted along with any planning application, providing detailed description of the proposed development within a prescribed format. In riverfront areas, these Structure and Local Plan policies as well as the Development Proposal Report specify the proposals and strategies for the comprehensive and enhanced development of these areas.

Local Authorities

Local Authorities grant planning permission for development projects along riverfront areas subject to the approval of the State Authority. Where a river runs through several local authorities, a joint committee consisting of adjoining Local Authorities and related technical departments is formed, for example the Klang River Beautification Project.

Department of Environment(DOE)

The DOE is concerned with the implementation of the Environmental Quality(Prescribed Activities)(Environmental Impact Assessment) Order 1987. This includes the control of water quality in rivers to ensure the effluent discharged from industries are within permissible limits.

An Environmental Impact Assessment(EIA) report is required during the submission for planning permission for certain prescribed activities and size. The EIA stipulates mitigating measures to be undertaken by the developer, in regards activities having consequential effects on the environment(including natural water courses such as rivers).

ISSUES RELATED TO RIVERFRONT DEVELOPMENT

Issues in to riverfront development are commonly related to:-

- buildings backing on to rivers;
- rivers treated as a sewer (example latrine and domestic waste disposal etc);
- no proper set-back of building in relation to river banks;
- unsystematic subdivision of lots fronting rivers;
- no proper access to river frontage;
- existence of squatters along river banks in major towns; dan
- low grade economic activities along river banks.

In addition, issues are also related to legislative, manpower, environment and public apathy.

legislative

River is basically a state matter. State Authorities have absolute ownership of all land within their boundaries inclusive of all rivers, streams and watercourses.

Under present legislation, land abutting the river is not automatically gazetted as river reserves, although Sec. 62 of the National Land Code provides for the gazetting of river reserve for public utility. At the moment only the State of Pahang and Kelantan have gazetted them as protected areas.

Manpower

Notwithstanding the various legislation's, inadequate manpower faced by local authorities and relevant technical departments have resulted in poor enforcement and monitoring activities along riverfronts.

Environmental

Activities along rivers have direct and immediate effect on the river and its water quality. Large areas have been cleared of trees and ground protection to make way for development. Recreational projects such as golf courses, theme parks and holiday resorts have indirectly contributed to the siltation of rivers. This is further aggravated by agricultural activities (for example animal husbandry and commercial cropping) through the discharge of animal wastes and chemical pesticides.

Public Apathy

Public apathy continues to be a major factor to concerted efforts to rehabilitate environment along the riverfronts. Rivers has been used to cart away wastes generated by domestic, commercial and industrial activities. The government has taken various measures to educate the people, namely targeting at the young, to love our

rivers. Campaigns such as the "Love Our Rivers", undertaken by the DID is one such example.

PROSPECTS OF RIVERFRONT DEVELOPMENT

Not with standing the issues at hand, the Government takes a serious view that rivers in the country be developed and beautified for recreation and tourism. For example the National Tourism Masterplan recognizes rivers as a source for tourism attraction. This augurs well for future development on riverfronts.

Recent decade has seen a 'back to nature' movement, where a new generation of tourists are seeking the tranquillity and natural beauty of forests, mountains and waterways. Rivers are now viewed for their aesthetic beauty in addition to utilitarian use. Enormous opportunities and potential exist for nature study, water sports and tourism related activities (river cruise, eco-tourism and river adventure). Water based activities such as boating, swimming, fishing, water skiing and wind surfing have gained in importance and popularity.

In addition, buildings along riverfronts worthy of conservation due to their rich historical and cultural heritage are presently being examined to be conserved for tourism purposes. Besides tourism and hotel development, riverfront properties are highly sought after for residential and commercial development. River view, lake view, or sea view has become a key selling point for prestigious development projects.

POLICIES AND GENERAL GUIDELINES ON RIVERFRONT DEVELOPMENT

Structure Plan Policies

Relevant policies incorporated in the Structure Plan have been

formulated pertaining to the following concerns:-

- Water quality in the river should fulfill the requirement for water consumption class III.
- Tightening the enforcement of policies and strategies on land rehabilitation.
- Providing buffer areas on water sources and specify suitable uses to prevent water pollution.
- Gazetting water catchment and forest reserve.

Detailed development strategies are outlined further under each policy statement. These policies and strategies are approved by the State Planning Committee and endorsed by the State Executive Council and there after gazetted.

Local Plan Policies

Being detailed development plans further emphasizes the development of riverfront areas or other upstream areas that would have a direct impact on rivers and the riverfront environment.

For instance main water outlets, especially trunk drains are drawn up and identified and strategic measures outlined in the accompanying report to ensure that development along riverfronts will not be detrimental to the riverfront environment.

Development Proposal Report

The Development proposal Report, as required under the TCP Act(Amendment) 1995 details out information and justification for the proposed development of any area. These include amongst others - details of land ownership, site analysis, topographical requirements landscape, drainage pattern and the natural resources available. They are present TCP Act(Amendment) 1995, developers also required to provide location of trees above 0.8m diameter for the purpose of preservation. Therefore this requirement also applies to any development proposal along riverfront areas.

River Corridor Policy

River corridors in the urban area forms an important element in the urban design and landscape of towns and provide a diverse ecological, scenic, cultural and recreational resource. Land within river corridors are to be protected from urban development and used primarily for recreational purposes whilst ensuring that stream flow and water quality are maintained.

In general, the objectives of river corridors are :

- To conserve the natural, ecological, cultural and landscape qualities of major river corridors;
- To ensure development is compatible with the physical and ecological carrying capacity of the site and to the whole open space system;
- To provide for balanced range of river and off-river recreation and other uses;
- To provide for a range of recreational activities;
- To maintain stream flow and protect water quality;
- To ensure compatibility between land and water uses and natural character of the rivers; and
- To provide opportunities for environmental education, interpretation, research and scientific programmes.

Design Principles and Guidelines

The DTCP, together with DID are presently formulating policies and development guidelines aimed at alleviating existing riverfront issues. Design principles are orientated with the following objectives:

- To turn the focus of the town towards the river and not away from it;
- To create a first class civic riverfront environment that will become the primary usage of the town;

- To introduce commercial and property developments within the ambit of a sustainable environment;
- To develop a use for water in the form of watersports and boating facilities etc;
- To develop a landscape character unique to, and identifiable with each individual town; and
- To conserve and restore buildings of historical and cultural values.

To achieve the above objectives, the following guidelines are provided.

Permitted Landuse

Among the types of landuse suitable for riverfront development include:-

Recreational use - park, jogging track, rest and service area, theme parks, water sports, tourism related activities such as boat cruises, stalls, etc.

- *Commercial use* - offices, food court, curio shops/stalls;
- *Housing development* - condominiums, detached and terrace houses;
- *Golf courses* - with relevant set-backs and buffers;
- *Industrial development* - light and non-polluting industries, such as boat building and marine-related activities; and
- *Cultural and exhibition centre.*

Non-permissible landuse

- Heavy and high risk industries;
- Storage for toxic and dangerous material;
- Petro-chemical storage and plants; and
- Cement and concrete industry.

Other Development Guidelines

- To optimize the natural beauty of the river, the riverfront shall be made accessible to the general public;
- Development fronting rivers shall be lower in height so as not to block the river view from development further in. Height control to be imposed on all buildings along the riverfront;
- All developments shall face the river to optimise the benefit of the river view as well as to ensure that river is not treated as garbage disposal channel;
- Housing development shall have a minimum set back of 20 meters from the flood plain;
- The minimum set-back for a golf-course shall be at least 10 meters from the flood plain. No permanent building is allowed within the reserve; and
- Reference should also be made to the National Landscape Guideline relating to landscaping along riverfronts.

IMPLEMENTATION OF RIVERFRONT PROJECTS

Generally, there are two approaches to riverfront development, i.e.

Protection, Conservation and Promotion

This approach applies to most of the rivers in the rural areas, forest reserves and water catchments. Where rivers flow through remote areas, the surrounding areas along the rivers are left in their natural setting. The water quality is constantly being monitored. Felling of trees and land clearing for urban development is strictly prohibited.

Design, Development and Landscaping,

This applies to more urbanised area where a river and its corridor forms the precious green lung of the urban fabric. Examples of such projects include certain stretches of Klang and Gombak River, Malacca River, Alor Star, Sibul and the Kuching Waterfront.

Many river development and beautification projects are actually a combination of the two approaches and it is difficult to generalise the measures taken on each river. They however include engineering treatment of the embankment, cleaning the rivers of its floating debris, landscaping along river reserve, provision of facilities for water sports and river adventure.

The approach to riverfront development differ from one location to another, due to availability of resources and inherent locational constraints. Funding of projects are mostly from State Governments. However, funds from the private sector are also obtained through cross-subsidy arrangements particularly for commercial property development.

Many riverfront development projects are being carried out throughout the country by various agencies. Some are still in the planning stages. Rivers through Johor Bharu, Alor Setar, Kuala Kangsar and Lumut are being developed and beautified. Upon completion, many of these will have linear parks with public recreational amenities. Playgrounds, jogging tracks, fishing spots, curio, handicraft stalls and food centres shall be provided, contributing wider economic opportunities for the local residents, a healthier urban lifestyle in consonant with the "healthy city concept" of the World Health Organisation.

Two riverfront projects adopting different approaches are described in the proceeding paragraph. One has a low key approach of enhancing natural river resource, while finding good economic justification for keeping the natural forests and traditional villages in natural rural setting, whilst at the same time promoting the use of rivers for sporting activities. This approach has been adopted by the State of Perak in the SUPERI project. The second example is that of the city of Kuching, which has adopted some excellent design principles in its riverfront development project. This project has received several international recognition which may be emulated and expanded upon for riverfront development in other urban centres in the country.

SUPERI Project

SUPERI is the acronym for "Perak River Beautification". It combines the two basic approaches described earlier, where extensive landscape and development are done at selected sites. Elsewhere, the natural setting of kampungs and orchards along the river are retained. Under the Perak Regional Plan, the whole stretch of the Perak river from Hulu Perak district(Upper Perak) to Hilir Perak(Lower Perak) has been zoned as a tourist belt.

The Perak River flows through several administrative districts linking places of touristic interest such as Temenggor Dam, Kuala Kangsar, Parit, Kampung Gajah and Telok Intan. Many buildings and places of historical and touristic interest are found along the river, in particular the location of various Royal Mausoleum sites. The river is the uniting element linking all the places of touristic interests. This project is planned along the line of river adventure with eco and agro-tourism. The Perak River Safari is organised occasionally.

Kuching Waterfront Project

The Kuching waterfront project is the largest and by far, the best example of such a development in the country. The design and construction of this project started in 1990 and was completed in 1993. For a cost of about RM 87 million, a once neglected part of the waterfront has been transformed into a public leisure and recreational area. The area stretches for approximately one km from the former Ang Cheng Ho Building(now riverbank suite) to Pengkalan Batu(near Square Tower).

Brief Background

Kuching is one of the cities in Malaysia that is developed around the river. In the subsequent period of its development, buildings which were once prominent along the riverfront were taken over for

godowns and trade houses. It is the intention of the State government to reclaim the river for the people and to unlock its potential as a leisure and recreation resource for the future.

Concept

The conceptual framework emphasizes the best feature of the town while taking advantage of opportunities to create a fresh, new image. This approach is combined with a determination to achieve a high level of design quality within all facets of the project, ranging from architecture and landscape to paving patterns, furniture and artworks. The concept is founded on a number of design principles:

- Optimizing the amenity of the water;
- Creating a more useable and accessible waterfront with a sequence of special places;,,
- Identifying development opportunities;
- Reorganizing traffic and enhancing pedestrian amenities;
- Enhancing the relationship between the two river banks, the city's relationship to the waterfront; and
- The connection between land and water.

Project Design

A seven meter wide promenade extends along the entire length of the site and forms the spine from which all other activities are accessed. Covered belvederes cantilever providing opportunities for views and restful contemplation while shelters and pontoons provide for commuter and cruise boats.

Major focal points and zones are introduced along the promenade, catering for a range of activities increasing in intensity towards the town center. Trees along the promenade and street, provide shade and much-needed greening to this part of the city.

Impact of Waterfront To the Town

The new development provides a physical and psychological environment promoting a new pride in the river. Micro-climatic and aesthetic benefits are achieved by a combination of water and open site planning with extensive shade tree planting and provision of shade structures.

Since the completion of the project, Kuching waterfront has been a favourite venue for social gatherings , concert , regatta, school functions such as debates and contests. It has instilled pride among the local population and created an interest in urban renewal. The project has enticed many shop owners within the vicinity to voluntarily renovate their old shops , thus giving a new image while retaining its old structures. Many have also changed from warehousing activities and other lower value trades to highly remunerative tourist related activities such as selling of souvenirs, curio shops, restaurants, tour-agencies, etc.

CONCLUSION

This paper has discussed some issues relating to the development of riverfront in Malaysia. Brief description of planning guidelines were touched upon. The two examples serve to provide the few experiences in the country. The opportunities of riverfronts development in the country is enormous. As the growth of cities continues due to population increase and economic prosperity, the need for recreational open spaces and public amenities will be greatly felt. Riverfront development can provide an alternative to fill this need. Riverfront properties managed properly can become invaluable asset, enhance the beauty of the river and benefit the general public.

The future direction of riverfront development should be towards a

sustainable riverfront development.

The Strategies include;

- Conservation of natural resources
- Conservation of Heritage buildings and sites
- Encourage economically viable project
- Regulate and ensure compatible land use
- Protection of riverbank
- Promote river for water-sport, recreation and tourism
- Increase level of environmental quality
- Increase public participation and awareness

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Contributors' Biography

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Dato' Wan Mohamad Mukhtar bin Mohd. Noor obtained a Diploma in Town and Country Planning in 1969, and obtained a Diploma in Town and Regional Planning at University of Melbourne, Australia in 1973. He joined the Town and Country Planning Service as an Assistant Director in Regional Planning Division Of Federal Department of Town and Country Planning. Between December 1974, he was seconded to Kedah as the Acting State Director of the Department of Town and Country Planning Kedah while at the same time holding the post of Assistant Director in Regional Division. In June 1976 until April 1977 he was appointed Director of the Regional Division while Acting as Director of Rural Planning Division. In May 1977 he was transferred to the State Department of Town and Country Planning Perak, as the Director until November 30, 1993. On December 1st 1993, he has been appointed as the Deputy Director-General in charge of Development until today. Since joining the Public Service, Dato' Wan has attended many seminars and conferences and has presented technical papers at conferences both in Malaysia and Overseas. In the course of his career Dato' Wan has been awarded the 'Ahli Mangku Negara'(A.M.N.) in 1980, 'Paduka Mahkota Perak'(P.M.P.) in 1982, 'Darjah Paduka Mahkota Perak'(D.P.M.P.) in 1986 which carries the title Dato', and the 'Kesatria Mangku Negara'(K.M.N.) in 1995.

LIM SIEW CHIN

Lim Siew Chin graduated from Universiti Sains Malaysia with a Bachelor Science degree in Housing Building and Planning(1978) and Msc.(Planning) in 1980. She also has a post grad. Diploma in HPB from Rotterdam. At present she is serving with Research and Development Unit, Department of Town and Country Planning. She has served in the Department for 16 years in various different divisions. Her experience ranged from as Assistant Director of Town and Country Planning Perak State(1980-1985), to Regional Office(1986), and Southern Division(1987-1989), Central Division(1990-1995). During her course of duty, she has various experience from Development Control, project management to special project, and prepared and involved in various

special project, and prepared and involved in various plan making including Hulu Perak Regional Study, Perak Regional Development Strategy, Johore Review, Johore Barat Structure Plan, which has won an innovation award in 1990. Prior to serving with Jabatan Perancangan Bandar dan Desa she was lecturing in F.I.T. on Public Health, She also work part-time with JICA during her student days. She has also been a school teacher and has work with Survey Research Malaysia. Her practical experience also range from Dewan Bandaraya Kuala Lumpur, Architect Office and SPPK.

**A STUDY IN MACHINAMI(Historical Town)
CONSERVATION : ITS RELATION TO TOURISM
PLANNING -**

**A Comparative Study of Tsumago-juku,
Japan and Malacca, Malaysia.**

by:

Pn. Zainah Ibrahim

INTRODUCTION

This article discusses some aspects of Japanese conservation and Tourism planning specifically the Machinami(historical town) conservation project. It draws on a research and comparative study done between the town of Tsumago-juku, Japan and Malacca, Malaysia to compare the different approaches used in conservation. The article further discusses the research findings in both cases and suggests some promising features from the Japanese experience that could be applied for Malacca City.

TSUMAGO-JUKU, JAPAN

Tsumago-Juku is a historical(Machinami) post town located in Nagano Prefecture(state). Conservation movement has been carried out in Tsumago for the past 20 years and is the first area where a conservation project had ever been instituted in Japan i.e. in 1968.

The restoration of the historical structures in Tsumago-juku led to a re-appreciation of it's value as a historical site. The surrounding area was restored and protected as a result of the cooperation from the municipality, residents and architectural experts. Tsumagu-juku residents formed a committee which met often to discuss ways and methods to preserve their traditional community. Prior to that, when

Machinami in Japan, refers to a main street in the centre of a town or urban environment, where along both sides of the road lies a row of group of historical buildings. This does not only include the historical street elevation but also the townscape where the street lies.

houses deteriorated, the local people used to rebuild them as they liked. But, with the preservation movement, they restored them as the original appearance. With the local people's agreement and initiatives, they formed the "love Tsumago Committee" in 1968, and manage a number of restoration works. They formulated the 'Conservation Ordinance'(these are sets of Guidelines used to help them monitor the conservation projects) for Tsumago-juku and is basically named as the "Tsumago-juku protection People's Chapter". This Charter emphasizes on three(3) principals of conservation movement, i.e. "not to sell, not to lend and not to destroy".

In September 1976, Tsumago-juku was designated as a 'Protection Area for the Preservation of Traditional Buildings" by the Japanese government under the character of the Post-town with an area of 1,245.4 hectares, as part of the city planning area. A subsidy was provided by the federal and town government. This is one of the first national heritages as a historic quarters which was created by law. This concerted effort by the people, federal and town governments resulted in the renewal of Tsumago-juku's townscape.

At present, Tsumago-juku displays a close resemblance of its appearance over a century ago. The charming and aesthetic character of the town was not planned outright but evolved over the years through un-selfconscious trial and error.

Research Findings

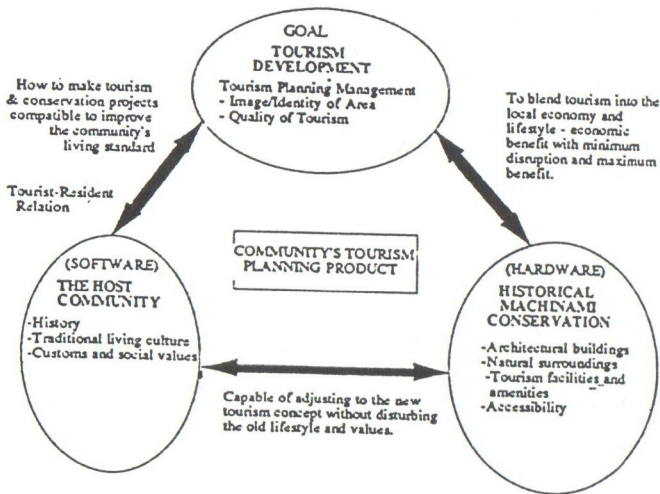
An interview survey was carried out on the local inhabitants to analyse their response and the results of the conservation move. The research findings are as follows:

- When the idea of conservation was first initiated in 1968, majority(87%) of the local people agreed to the idea. This facilitated and eased the conservation considerably. At the time of the survey(October 1994), the percentage had increased to 93%.

- 100% respondents agreed that the conservation works to promote the tourism sector has been an agent of change(either physically, socially or economically) to the overall living environment affecting the whole local community.
- Since the conservation move, there was a population decrease due to the outmigration of younger generation. This could be attributed to the strict conservation control that was imposed in the area.
- The number of visitors had increased yearly, but the number of overnight stays had declined. At the same time mass tourism had outnumbered individual tourists, hence affecting the quality of tourism.
- Tourism appreciation of the Edo(1603-1867)culture and architecture had influenced the local people, to be proud of their ancestral heritage and add to their willingness towards conservation. While association with tourists had broadened the views of the Tsumago people causing them to accept new ideas and adapt their way of life.
- Civic pride expressed in terms of architectural display that is extremely pleasing and successful uniformity of design was a result of the strong dedication of the government towards the preservation.

While tourism, through preservation(hardware) was the main purpose of the conservation programmes, there was improvement in the life styles of the local people(i.e. the software). Heritage preservation was done in conformity to tourism development with the simultaneous improvement of the local community's living standard and natural environment. Figure 1 illustrates further the beneficial linkages among the development components(hardware, software and tourism development) in Tsumago-juku's development concept.

Figure 1 : The Research Development Framework



- Every destination has finite supply of resources, including hospitality. The social carrying capacity concept was used for analysing the social impacts or sensitivity of the tourism development. The findings from the analysis can be summarised as follows :
- The history as base for preservation, where the Machinami conservation is used as the theme for tourism because it reflects their history, lifestyle and the environment;
- Tourism planning should be based on overall goals of the area;
- Promotion of local attractions to be endorsed by the local residents;

- Compatibility between tourism and conservation can be done through environmental factors (Environmental Impact Assessment);
- Well organised community planning through co-operation and greater involvement of the community;
- Co-ordinated Public and Private sector support;
- Broad-base community participation in tourist events and activities; and
- Continuous monitoring of tourism projects.

The success of preservation of the old town Tsumago-juku is a worthy lesson for other historic towns to follow. However, the approach has to be adopted to suit the conservation needs and objectives of the specific areas.

Recommendations for Tsumago-juku

Further improvement is recommended to the existing natural settings and historical resources to encourage more free individual travellers in Tsumago-juku. Also more nature-related tourist activities are recommended to encourage tourists to stay longer. The proposals include the following:

- To lengthen the visitors' time of stay by improving the heritage-tourism facilities within the conservation areas for example constructing a traditional and historical museum and adventurous viewing point at the top of the hill somewhere within the area;
- Proposal for a visitors' centre complex to be built in the area, including a Tourist Information Centre, Tsumago-juku's local product manufacturing showroom, rest area, local product handicraft shops and restaurants. The management of such facilities could be handled by the local community;

- While carrying out the conservation project, the operation and condition of minshukus(family-run Japanese style inns) need to be upgraded by improving the internal portion of the building, to provide a more convenient and comfortable accommodation e.g. providing a living 'communal' space, upgrading the toilet system and room entrance. The planned central sewerage system should be implemented immediately;
- To provide a variety of food cuisine and the construction of eating places. A large restaurant is recommended to accommodate mass group tourists;
- To discourage the younger generation from moving out of the area, new housing facilities, such as playground and town parks should be provided.
- To provide better information signage system(such as the town trail concept), uniform colour signage boards and usage of standard designs and harmonising these elements with the whole townscape;
- To introduce special tourism interests such as insect or bird-watching activities of Tsumago-juku.
- For the social carrying capacity studies, an environmental impact assessment should be implemented. With the local communities continued and active participation a local Community Development Corporation should be established with a specific funding system. Parallel to this effort, the government should improve the taxation system for such corporations to be viable.

MALACCA, MALAYSIA

Malacca is one of the oldest states in the Peninsular of Malaysia. The Malacca city centre(573 hectares) is situated in the district of Malacca Tengah with a population of 74,962 or about 25%(in 1991)

of the total Malacca Historical City Council area. Malacca's tourism industry is primarily based on the historical resources of international significance. It's architectural form is a rich blend of historical influences with unique building forms borrowed from the Malaysian, Chinese, Indian, European and Middle Eastern architecture.

The three main elements of Malacca's main tourism attractions are the rich unique historical architecture, the mixture of cultures and varied cuisine. The major architecture features include :

- China Town in the north of the Malacca River;
- St. Paul's Hill to the south of the Malacca River; and
- Other very interesting and significant historical and architectural attractions.

In 1987, the Structure Plan was formulated for the entire municipality area while in 1988 the Preservation and Conservation of Cultural Heritage Enactment(PCCHE) was enacted by the State Government. Since 1989 the State has facilitated and implemented conservation measures, in particular, control of building height and location of new developments within the city.

Some Observations On The Malacca Structure Plan And Related Studies

Based on the findings of the Malacca Structure Plan and other related studies, it is found that :

- There is a growing awareness of the value of architectural heritage within Malaysia thus creating the awareness for the need for heritage conservation;
- The PCCHE provide immense power to the local authority, nevertheless is not sensitive to the needs of landowners and could hinder further improvement or development progress

as it will displace the community away from the old town (conservation area);

- Various guidelines for its future planning, development and control as a historical tourism area has been produced. However, the top-down system has little concern over local community participation. This needs critical examination;
- Conservation programmes are not allocated with adequate resources, in terms of funds, skill and manpower; and
- The principal problems affecting Malacca's tourism industry are as follows:
 - low number of international and domestic visitors;
 - short length of stay;
 - modest visitor spending; and
 - a relatively insignificant figure in tourism-related employment opportunities.

Recommendations for Malacca

Learning from the Tsumago-juku's experience and other countries(i.e. United States of America and United Kingdom), it is recommended that the following aspects be examined to further promote the Malacca heritage-tourism industry;

- Amendment to the Town and Country Planning Act, 1976² , and other related acts to include aspects of conservation;
- The PCCHE should be revised to include :
- specific definition of Conservation Area, its designation and also related technical terms;
- the importance of completing the inventory of historic buildings and the preparation of conservation maps to assist legislators.

This study was carried out in 1994. It is acknowledged that, at present, the TCPA has been amended to include aspects of conservation

- appointment of a Conservation Officer or trained personnel for the heritage-tourism planning, in particular, and the list of the duties on conservation within the planning section of the local planning authority.
- the establishment of a system of financial aid to owners of historic properties, such as the preservation and conservation fund; and
- the establishment of a State Appeal Board to handle disputes on conservation-related cases.
- conservation in Malacca requires management for a large and important area of the city. It cannot be separated from the planning and development policies and practice of the whole city, i.e., conservation must complement development. The Structure Plan has come up with broad development proposals and these proposals should be implemented as scheduled;
- the component of community planning as typified in Tsumago-juku can offer useful lessons for Malacca because being a pioneer in conservation development (with tourism as its main goal), its planning has to-date been systematically carried out and organised;
- anticipation of the host community needs as well as the needs of their guests in the overall tourism planning is vital. For this purpose dialogue with local people can be done through workshops and forums, while information tourism needs can be gathered through regular questionnaire surveys or focus group workshops on their preferences and complaints;
- publication of guidelines to help historic property owners to understand the need for preservation and the ways to protect their properties. Other guidelines pertaining to design and siting of new buildings should also be produced; and
- In order to ensure an effective environmental planning and policy framework, some degree of power decentralization to

the state authority is necessary, to effectively discharge environmental and tourism development programmes.

5. CONCLUSION

The development framework as well as the ecological and social carrying capacity concept suggests that the machinami conservation and tourism development planning cannot be done in isolation. Being a "living museum", there is an interdependence in the system because neither can succeed without the other, the natural resources of the community require the industry's involvement to inform, transport, and accommodate visitors, whilst the industry needs social support from the destination community to fulfill its hospitality function. As in the case of Tsumago-juku, this is based on the overall goal and priorities identified by its residents, a concept that can be replicated to the Malacca City. Sustainable tourism community development offers an alternative to mass commercialized tourism as it considers both the ecological and the social carrying capacity of the destination area.

Relating to the local case study, the Malacca State Authority and the Malacca City Planning Council would require some substantive adjustments via giving greater concern to promoting effective, accountable public planning and decision making, towards achieving sustainable development within the area.

In summing-up, this article suggests a new approach in tourism planning against the traditional planning approach as applied to the Malacca historical city. This approach emphasizes on the social element over the development of natural resources and the individual over the community element in tourism development.

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BOOK REVIEW

TOWARDS AN ECO-CITY: CALMING THE TRAFFIC

by

Hajjah Nazirah Mahmud

The author of this book, David Engwicht, came up with this book quite by chance. It started off as a campaign to oppose a consultant's proposal to 'upgrade' Route 20, a road passing through the suburbs of Brisbane, Australia, where the author

resides. The residents formed a group naming themselves **CART** for (Citizen Against Route 20). Just about a week before the consultants released their report, CART stole the grounds by releasing an alternative report *Traffic Calming*. This ended with the consultant having to include traffic calming as one of their options to Route 20. *Traffic Calming* not only became an instant hit in Brisbane, but requests flooded in from councils, consultants and community action groups from all over Australia and even overseas. It was a result of

twelve months of concerted thinking by a group of people who had no previous experience in traffic or town planning, yet this literature was quoted widely as the bible on traffic and transport.

TOWARDS AN
ECO-CITY
CALMING THE TRAFFIC



DAVID ENGWICHT

Towards an Eco-city is a record of the author's evolving understanding of the role of transport in cities. Cities are places to **maximise exchange** (culture, goods, friendship, knowledge) and **minimise travel**. The need for transport systems therefore is; as a means to an end, i.e. **facilitating exchange**.

Engwicht related the topic as would an ordinary man on the street rather than as a traffic or transport planner. He was somewhat philosophical in his undertakings, narrating the attributes of an eco-city which he defined as "a people-made eco-system (city) created to enable all participants to reach their fullest potential by maximising exchanges and minimising travel". Since it is an eco-system, such as a rainforest, everything is inter-related and inter-dependent.

He started off with describing the nature of the "eco-city" whereby the goal of transport is to facilitate exchange, not so much as a tool for movement; hence the central focus of the city is interdependence and mutual exchange. The other characteristics of the eco-city include the importance of events in the city (rather than matter), it is chaotic-not mono-cultural, spontaneous - not planned and a space as a place-not a destination.

The unchecked dominance of our cars on our streets has however eroded the nature of the eco-city in more ways than one. Not only has it destroyed the physical environment, it has also loosened socio-economic cohesiveness.

Engwicht quoted several examples of cities as having the attributes of the eco-city. He referred to Nuremberg and Munich in Germany and Gronigen in Holland as fine examples of eco-cities, being pedestrian cycle and disable-friendly. He was also quick to note that Los Angeles is the exact opposite, where the streets are only meant for cars. He also found that London too, seemed unfriendly to the disabled.

The author suggested ways of bringing back the eco-city; mainly through "eco-relational thinking". This has several implications for planning education, town planning and engineering professions, administrative structures and community involvement in decision making. Such an approach is dependent on all parties thinking in eco-relational terms and all being equal players (although with different skills).

The author in wrapping up his work offered a few guidelines for rebuilding the 'eco-city', i.e.

- Building healthy self-sufficient neighbourhoods with strong integration of living, shopping, recreation, social interaction, work and cultural activities. This centre should also contain the administrative services for local government affairs and produce goods and services to be consumed by the neighbourhood (including food) and allow the local recycling of waste.
- Strengthening city centre by providing specialized facilities and services which cannot be provided in neighbourhood centres.
- Optimising exchange efficiency e.g. through home-deliveries and telecommunication, increasing density of housing, job opportunities and exchange opportunities.
- Promoting exchange friendly modes of transport e.g increasing walk and cycle ways, by making them more pleasant especially through landscaping, inter-connecting green nodes and shortening distance green nodes.
- Charging the true costs for access by making car drivers pay on equivalent public transport fee for each journey made by car so that public transport system can be maintained with reasonable profit.

- Building the 'commons' e.g. courtyards, particoes, arcades, neighbourhood stores.
- Giving people and neighbourhoods greater control over decisions.

These guidelines have been practised in general by planning authorities worldwide. They therefore serve as constant reminders to ourselves as well as important points to dwell upon for those about to embark on city planning .

The author has brought about a different perspective on the subject of traffic calming. Rather than throwing straight forward solutions on traffic calming as most traffic books would unfold, he has narrated a holistic picture of traffic calming right to the nitty gritty of the role and purpose of the street furniture in relation to the street and vice-versa.

To someone who is keen on seeking quick solutions to traffic problems in the light of traffic calming, he will surely find it an arduous task for there are no straight forward checklists to refer. Instead the author has managed to set the reader to dwell into every little detail of the city and its traffic like an ecologist, where every part is inter-related to one another. It is indeed an important beginning to start with in our daily endeavours.

Contributor's Biography

Hajjah Nazirah Mahmud graduated with a Bachelor's degree in Urban and Regional Planning from Universiti Teknologi Malaysia in 1982. She obtained her MSc. in Transportation Planning and Engineering from the University of Southampton, England in 1995. She has served the Department under different divisions and was involved in various projects including regional plans, structure plans, local plans, district development plans and special projects. She is currently with the Kuala Lumpur Project Office, Development Plans Division, Federal Department of Town and Country Planning

NOTES FOR CONTRIBUTORS

The Editorial Board accepts articles relating to urban development, in particular to the Malaysian scene. Urban development encompasses a wide range of topics. The present Editorial Board have not placed any definite theme so as to encourage a wider choice of topics to be included.

Given the pace of development in our country, there should be no lack of suitable topics to be written. We encourage planners, academicians, sociologists and related professionals concerned over the physical environment to write.

Submissions could be in the form of articles, book reviews view points, policy reviews, debates, technical reports or research notes. Headings are not fixed.

The preferred length of article should ideally be within the range of 5 to 10 pages, typed double spacing on A4 sized paper. Contributors are encouraged to submit articles together with IBM-compatible diskettes (preferably 3.25 inch). Please mention the word processing software used and its version to facilitate usage of the diskettes. Currently, articles are produced using Microsoft Word 6.0. Alternatively, articles can be sent to us via electronic mail: fauzi@jpbddip.po.my.

The Board will return articles and diskettes but will not be responsible for their loss or damage.

Articles used will be acknowledged by way of its author receiving two copies of PLANNING MALAYSIA.

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