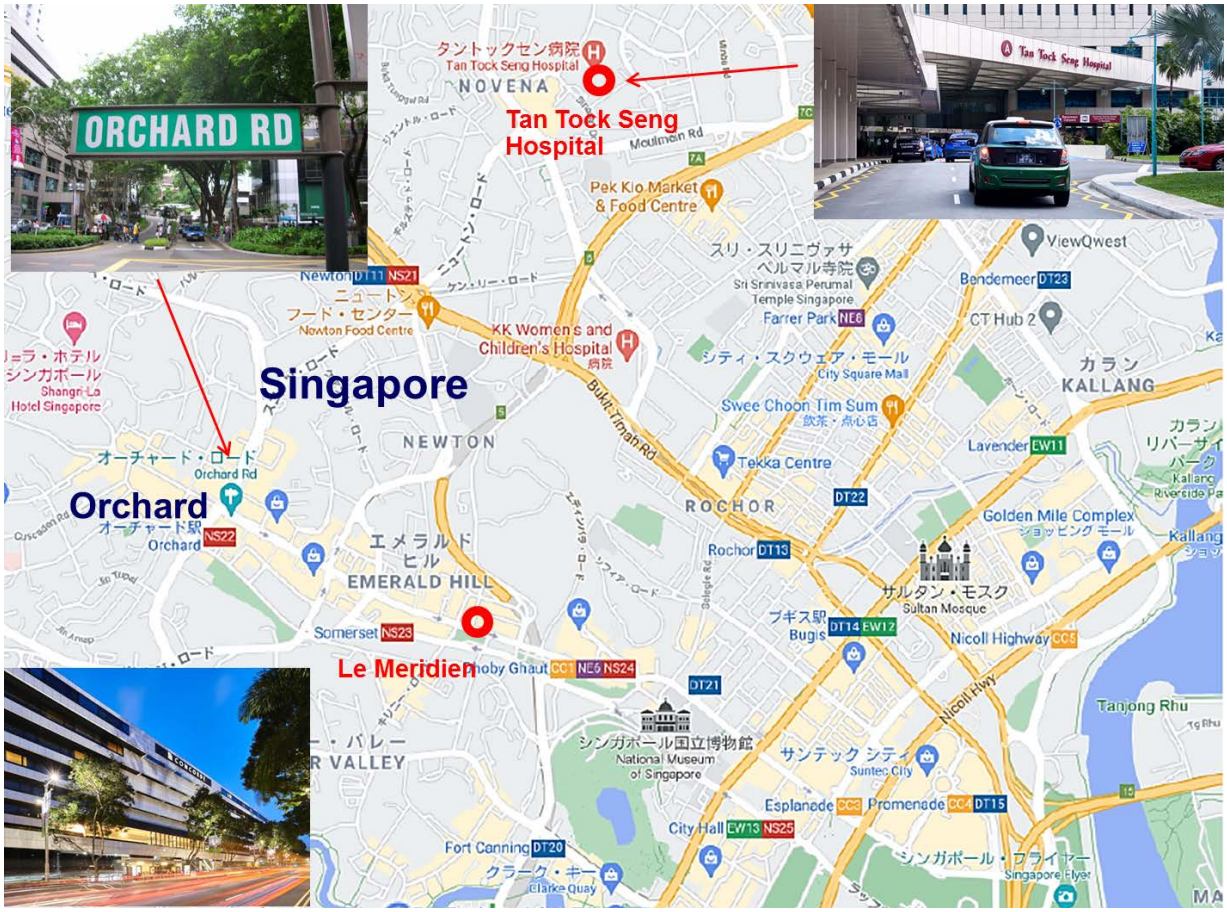
Business Meeting Singapore /Bangkok

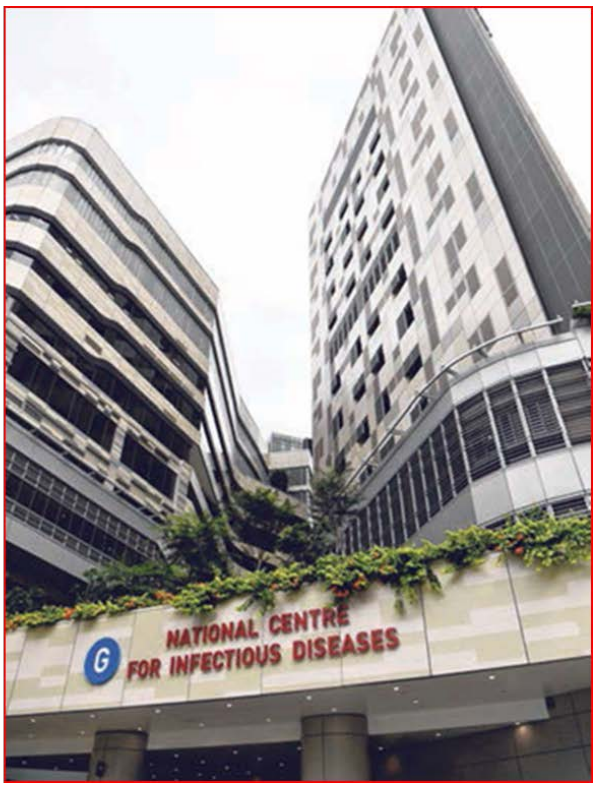
Schedule: 2008.03.23～04.01
2008.03.23 Kansai ⇒Singapore
2008.03.24 10:00-17:00 Meeting with Tan Tock Seng Hospital & Toyota Tsusho
2008.03.25 Singapore ⇒Bangkok
2008.03.26 13:00-17:00 Meeting with NECTEC
2008.03.27～28 10:00-17:00 Meeting with DITH
2008.03.29～30 Free
2008.03.31 10:00-17:00 Seminar at Thai Auto Motive Show
2008.03.31 Bangkok ⇒Chubu(+1)

2008 年 3 月 24 日にシンガポールで Tan Tock Seng Hospital に QR コードの紹介を行い、その後、豊田通商シンガポールと AIDC に関するビジネスの進め方について調整した。3 月 25 日にバンコクに移動し、翌 25 日に CICC と一緒に NECTEC と QR コードプロジェクトの契約の話をした。29 日～30 日の土日はパタヤを訪問した。31 日は自動車ショウで見学、講演を行った。
NECTEC; National Electronics and Computer Technology Center
CICC : Center of the International Cooperation Computerization
DITH : DENSO International Thailand



Le Meridien Singapore (Concorde Hotel Singapore)

Tan Tock Seng
HOSPITAL



DENSO WAVE 1

QR Code Features

- Large Data Encoding
- Reduce Space Printing
- Multi-direction High Speed Reading
- Kanji Letter Coding
- Damage Proof

All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 2

About 2D Symbology

2D symbology can hold large amount of data by carrying information both horizontally and vertically direction.

Symbol Type	Linear Symbol	2D Symbol
Data Type	Alphanumeric	Alphanumeric, Binary
Data Capacity	Approx. 20 char.	Approx. 2,000 char.
Data Density	1	20 - 100
Data Restoration	No	Yes

All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 3

Typical 2D Symbologies

ISO Standard 2D symbologies

QR Code | PDF417 | Data Matrix | MaxiCode

Veri Code | Codablock | Aztec Code | Code 16K

Code One | Calula Code | BP04 State Code | Postnet Code

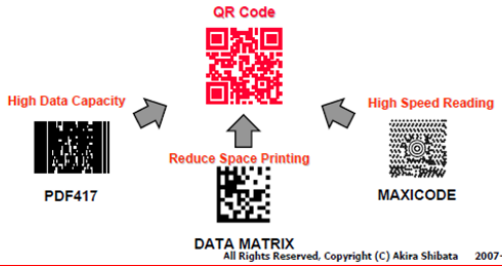
All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 4

QR Code is...

QR Code is

- the 2D symbology developed by DENSO CORPORATION in 1994.
- an excellent code integrating every merit of 2D symbology; high data capacity of PDF 417, reduce space printing of Data Matrix, high speed reading of MaxiCode.



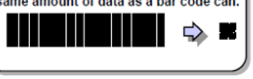
All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 5

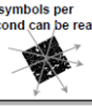
QR Code Features

High Data Capacity
Up to 7089 char. (numeric)

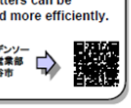
Reduce Space Printing
A 10 % sized QR Code can carry the same amount of data as a bar code can.



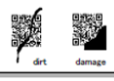
Multi-direction High Speed Reading
30 symbols per second can be read.



Kanji Letter Coding
Kanji letters can be encoded more efficiently.



Damage Proof
Even 30 % damaged code can be read.



All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 6

QR Code Specifications

Symbol size	21 X 21 modules - 177 X 177 modules (size grows by 4 modules/side)
Type & amount of data	Numeric: Max. 7,089 char. Alphanumeric: Max. 4,296 char. 8-bit byte: Max. 2,953 char. Kanji: Max. 1,817 char. (Mixed use is permitted.)
Error correction	Level L: approx. 7% of codewords can be restored. Level M: approx. 15% of codewords can be restored. Level Q: approx. 25% of codewords can be restored. Level H: approx. 30% of codewords can be restored.
Structured append	Maximum 16 symbols

All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 7

HISTORY of QR Code Standardization

1996/06	Japan Stationary Association	
1997/10	AIM Automatic Identification Manufacturers	AIM ITS 97/001
1999/01	Japanese Industrial Standard	JIS-X0510
1999/09	JAMA Japan Automobile Manufacturers Association	JAMAEIE001
1999/09	Japan Contact Lens Association	
2000/06	ISO International Organization for Standardization	ISO/IEC 18004
2000/11	Automotive Industry Action Group	AIAG-B13
2000/12	Chinese National Standard	GB/T 18284
2001/04	Japan Trucking Association	
2002/10	Korean National Standard	KSXISO/IEC18004
2004/01	Vietnam National Standard	TCVN7322

All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26

DENSO WAVE 8

QR Code Products

■ **Decoding products**

ACCU-SORT, DATALOGIC, DENSO, INTERMEC, METANETICS, PSC, TOHKEN, WELCH ALLYN and others **support QR Code.**

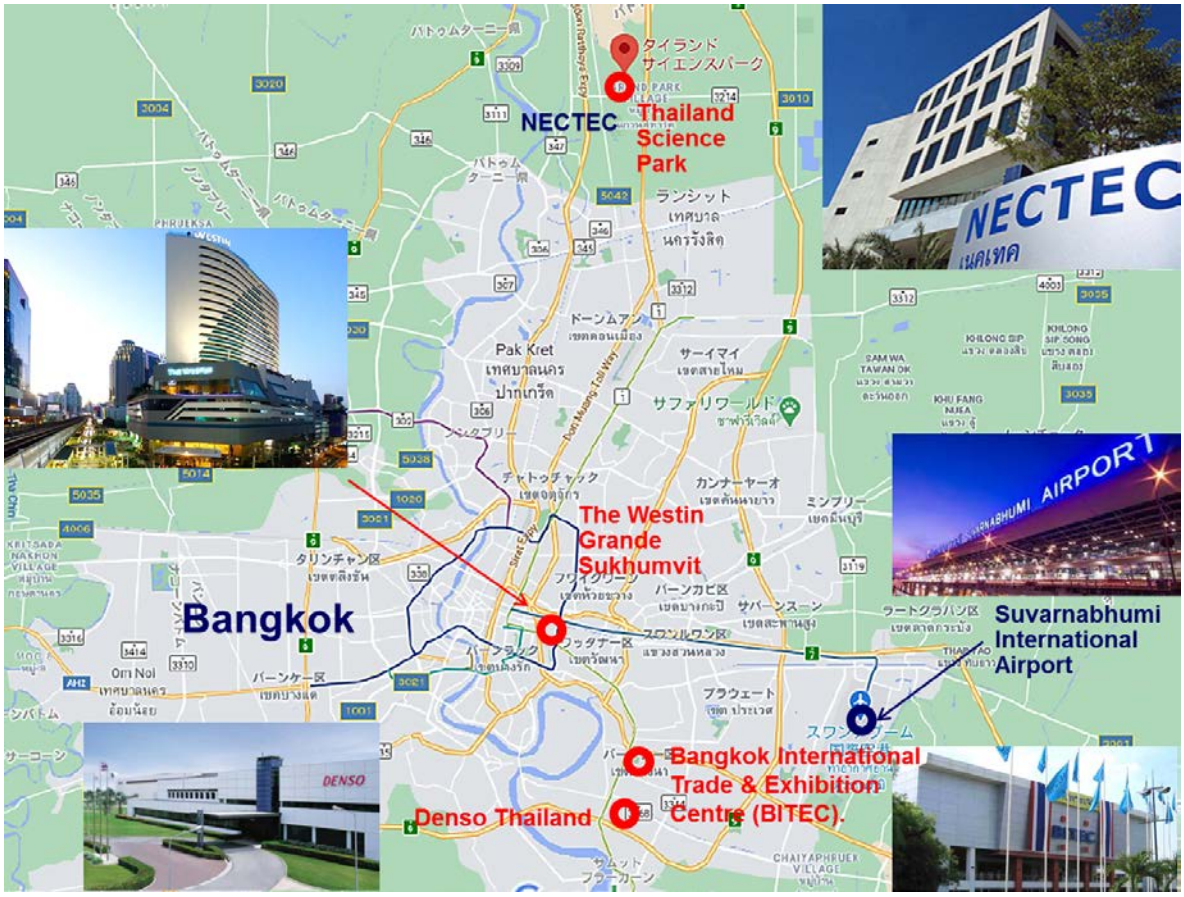
Handy type | Pen type | Camera type | Terminal Type | Fixed Type

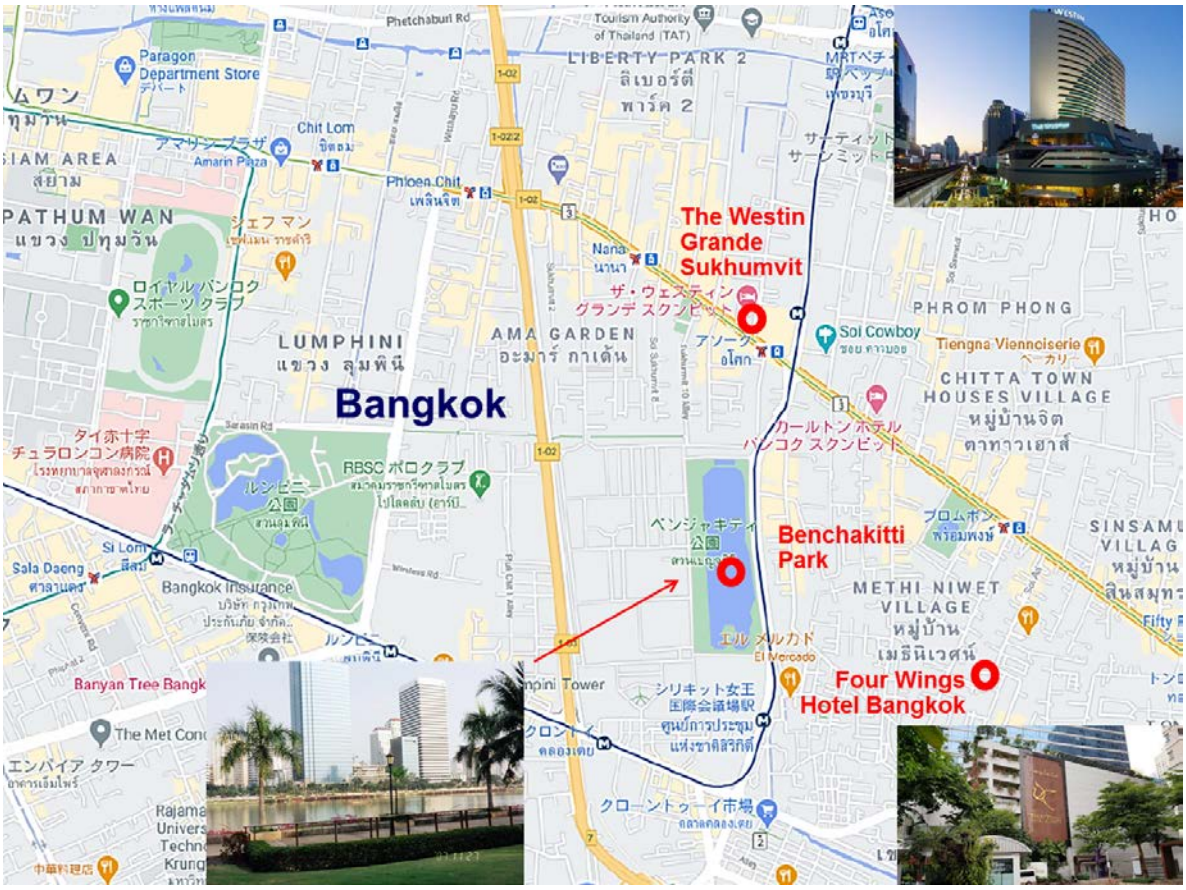
■ **Encoding products**

DATAMAX, ELTRON, GRAFTEK, INTERMEC, INVESTIX, SATO, SEAGULL, THARO, TEC, ZEBRA and others **support QR Code.**

Label printer | Page printer | Laser marking | Windows software

All Rights Reserved, Copyright (C) Akira Shibata 2007-11-26


NECTEC
Thailand Science Park
The Westin Grande Sukhumvit
Bangkok
Suvarnabhumi International Airport
Bangkok International Trade & Exhibition Centre (BITEC).
Denso Thailand


The Westin Grande Sukhumvit
Bangkok
Benchakitti Park
Four Wings Hotel Bangkok

The Westin Grande Sukhumvit

Denso Thailand

Bangkok International Trade & Exhibition Centre (BITEC).

2008.03.31
Bangkok International
Trade & Exhibition
Centre (BITEC).

2008.03.31
Bangkok International
Trade & Exhibition
Centre (BITEC).

DENSO WAVE 1

RFID Technology Overview

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

DENSO WAVE 2

RFID Applications in Japan

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

Former Prime Minister Visits Kaiten-Sushi

DENSO WAVE 3

Ikebukuro, Tokyo (Aug. 10, 2003)

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

Prime Minister Visits Kaiten-Sushi

DENSO WAVE 4

Koizumi Cabinet Mail Magazine

Koizumi Cabinet Mail Magazine No.110

========== Sep. 18, 2003

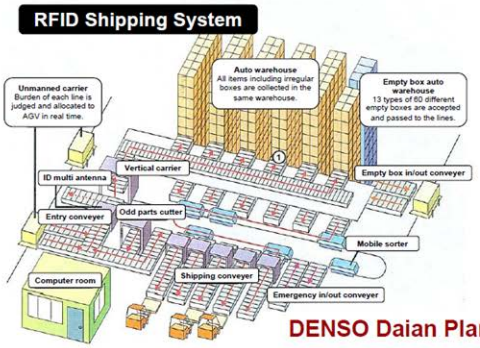
●Regulatory reform is currently in progress.

I'm Junichiro Koizumi. This week, I'd like to talk about the regulatory reform. As some of you may know, I visited one of the Kaiten-sushi restaurants in Tokyo last month to see how the latest IT technology is introduced in the existing systems. In the restaurant, various kinds of sushi foods are placed on the plates rotating around the table counter. These plates are differently priced by the type of sushi. The technology used here is an RF tag, a 1mm square small semiconductor chip with an antenna embedded in each plate. The payment accounting is smoothly handled by reading the prices written in the tags. In this RF tag system, the data on different tags embedded in plates of different prices is easily collected with a specially designed device that is a size of cell phone and this is possible even for the plates that are piled up on top of the other. You are given the target information, such as how many plates you have consumed and the payment amount, just by moving the device closer to the plates.

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

Auto Warehousing System (1)

DENSO WAVE 5



All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

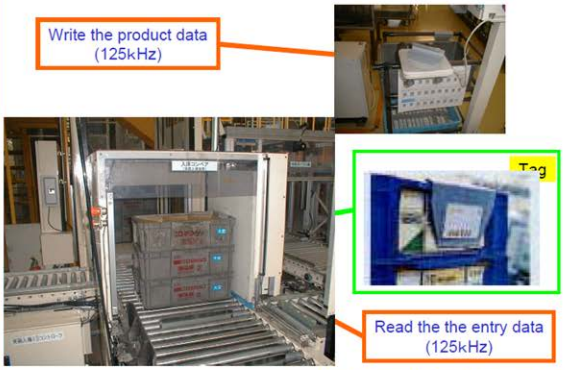
Auto Warehousing System (2)

DENSO WAVE 6

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

Auto Warehousing System (3)

DENSO WAVE 7



All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

Distribution Center (1)

DENSO WAVE 8

An RF tag is put in each box during the item sorting process.

All Rights Reserved, Copyright (C) Akira Shibata 2008-03-30

DENSO WAVE 1

Characteristics of Automotive Industry and using Data Carriers

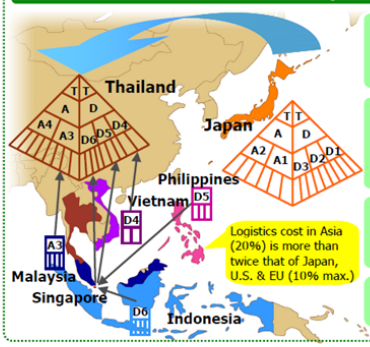
DENSO WAVE INCORPORATED
Akira Shibata

All Rights Reserved, Copyright (C) Akira Shibata 2008-04-01

DENSO WAVE 2

Business Globalization and Local Companies

Automotive Industry in ASEAN



Business globalization will bring a big chance to Local companies(LC).

Production is difficult within one country in ASEAN (each nation has its own expertise).

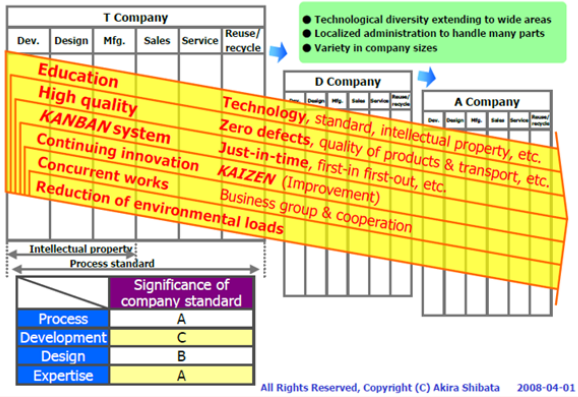
Production based on each nation's expertise can cover wide areas.

Reduction of logistics cost is essential.

All Rights Reserved, Copyright (C) Akira Shibata 2008-04-01

DENSO WAVE 3

Characteristics of Automotive Industry



- Technological diversity extending to wide areas
- Localized administration to handle many parts
- Variety in company sizes

	Significance of company standard
Process	A
Development	C
Design	B
Expertise	A

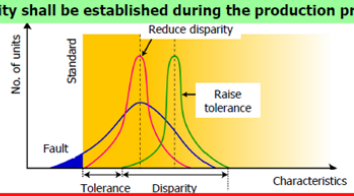
All Rights Reserved, Copyright (C) Akira Shibata 2008-04-01

DENSO WAVE 4

High Quality

Policy: Any faults in the car may result in fatal injuries!

- **Cultivate corporate culture: Education is of primary importance.**
  Zero defects, just-in-time, first-in first-out, *KAIZEN*
- **Zero defects: Uniformity of performance at component level**
  Delicate spec. that cannot be put in the drawings shall also be observed.
  - **Inspections conforming to drawings + master samples**
  - **Quality shall be established during the production process.**



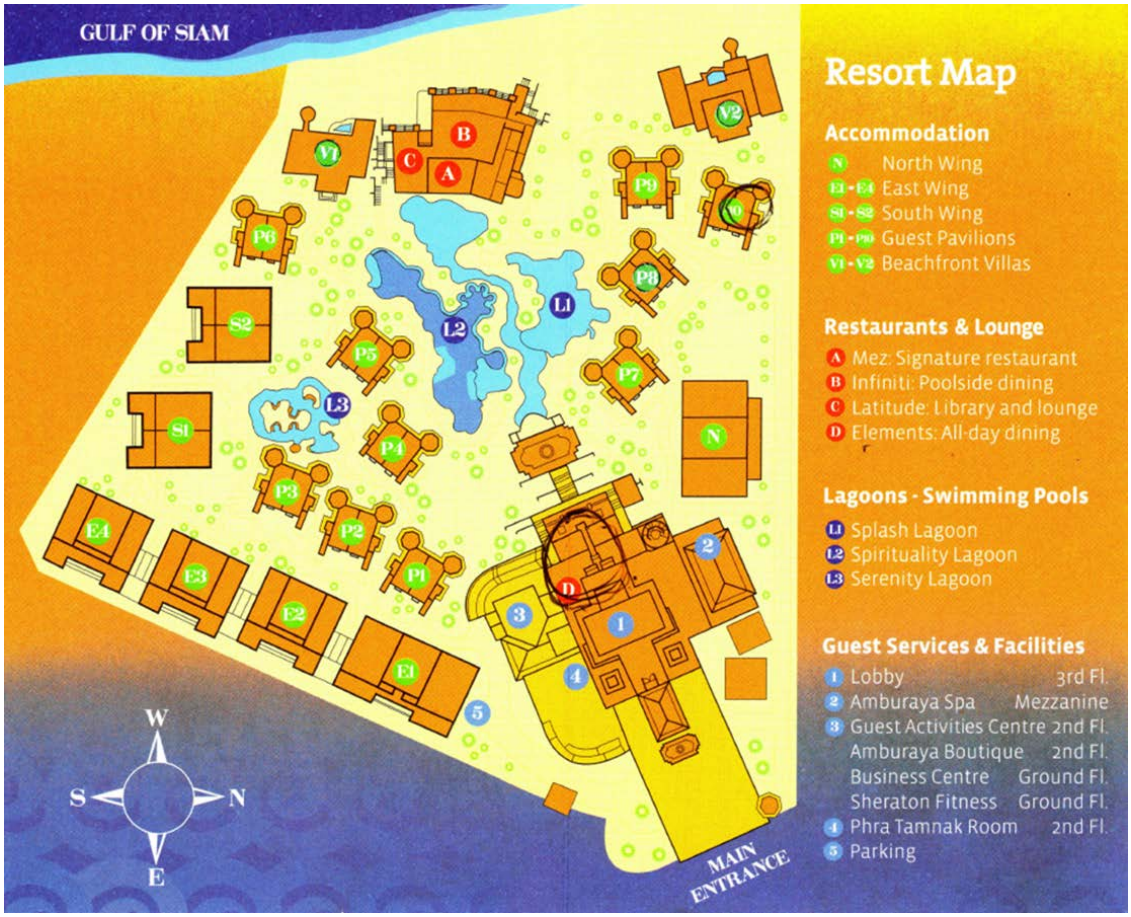
High product quality in technology & Expertise required

All Rights Reserved, Copyright (C) Akira Shibata 2008-04-01

2008.03.29 Sheraton Pattaya Resort

Sheraton
Pattaya
RESORT
sheraton.com/pattaya

Sheraton
Pattaya
RESORT


GULF OF SIAM
Resort Map
Accommodation
N North Wing
E1 - E4 East Wing
S1 - S2 South Wing
P1 - P10 Guest Pavilions
V1 - V2 Beachfront Villas
Restaurants & Lounge
A Mez: Signature restaurant
B Infiniti: Poolside dining
C Latitude: Library and lounge
D Elements: All-day dining
Lagoons - Swimming Pools
L1 Splash Lagoon
L2 Spirituality Lagoon
L3 Serenity Lagoon
Guest Services & Facilities
1 Lobby 3rd Fl.
2 Amburaya Spa Mezzanine
3 Guest Activities Centre 2nd Fl.
Amburaya Boutique 2nd Fl.
Business Centre Ground Fl.
Sheraton Fitness Ground Fl.
4 Phra Tamnak Room 2nd Fl.
5 Parking
MAIN ENTRANCE
W
S
N
E

King power
KING OF DUTY FREE
Copyright By
King Power Duty Free Co., Ltd.
Crescent Moon Beach
Naklua Bay
Palm Beach
Central Wong Amat Beach
Pattaya Beach
Pattaya Bay
Pattaya Park
Pattaya Kart Speedway
Dolphin Statue
Bus Station to Bangkok
Bus Station to The Northeast
Bus Station to The North
Local Bus Station
Pattaya Railway Station
Pattaya Elephant Village
Pattaya Plaza
Central Pattaya Rd.
North Pattaya Rd.
South Pattaya Rd.
Thep Prasit Rd.
Jomtien Rd.
Pattaya 1 Rd.
Pattaya 3 Rd.
Pattaya-Naklua Rd.
Potisan Rd.
Kophaiv Rd.
Naklua Rd.
Accommodation
Temple
Golf Club
Place of Interest
Park
Police Station
Bus Station
Hospital
Railway Station
Post Office
Walking Street
PATTAYA MAP

2008.03.29-03.30

HOUSE
CONDO
for
Sale / Rent
Kodak

2008.03.29-03.30

TIPP PLAZA
DIVE COURSES
DIVE TRIPS

DIVE
ASIA

RESTAURANT
Exchange
Express

WHITE ROSE 2
P. 72
Bar
PNINN
LUCIFER
DISKO
TK
THE GLASS HOUSE
A GO GO