

QR code project Bangkok

Schedule: 2008.07.28~07.31

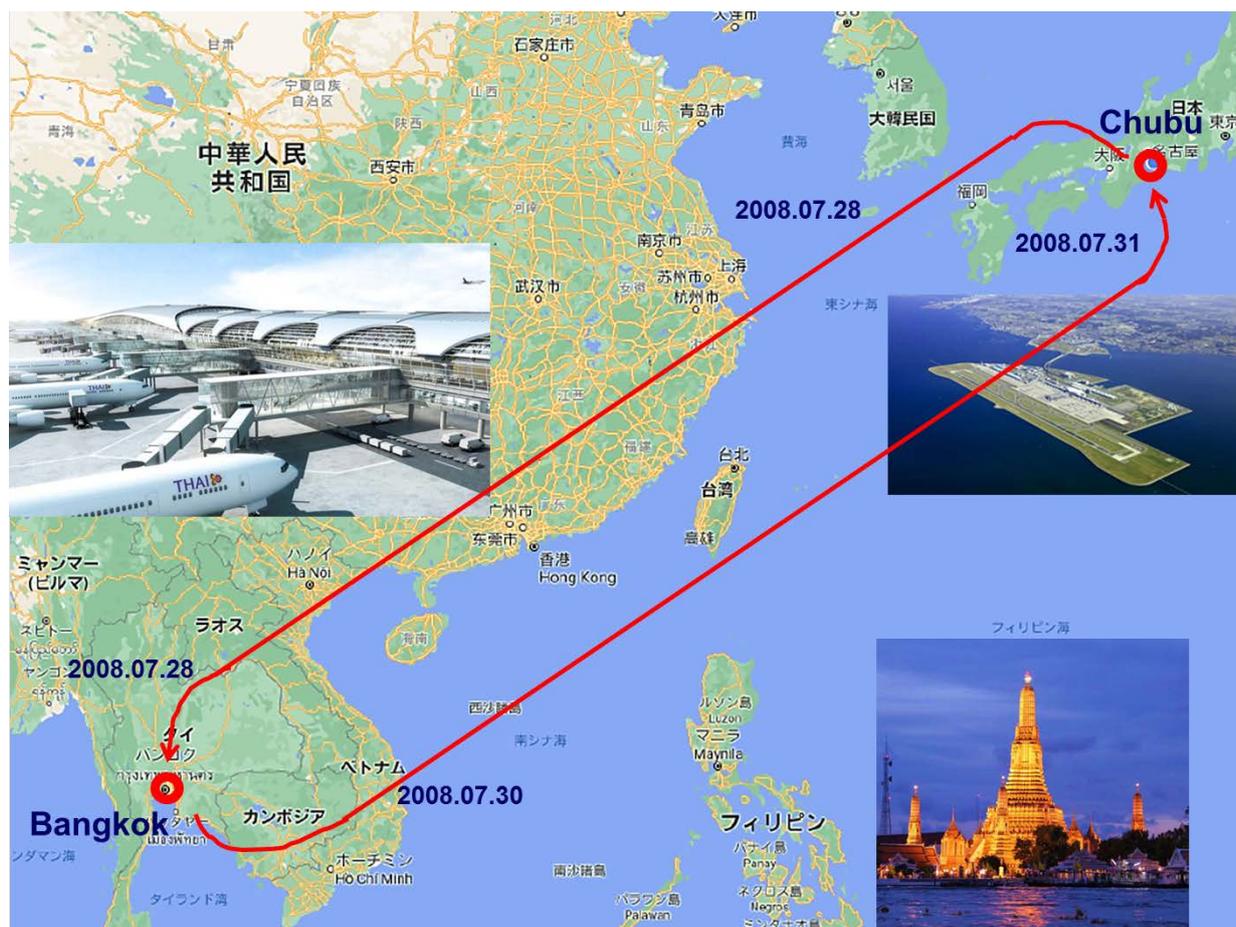
2008.07.28 Chubu ⇒ Bangkok

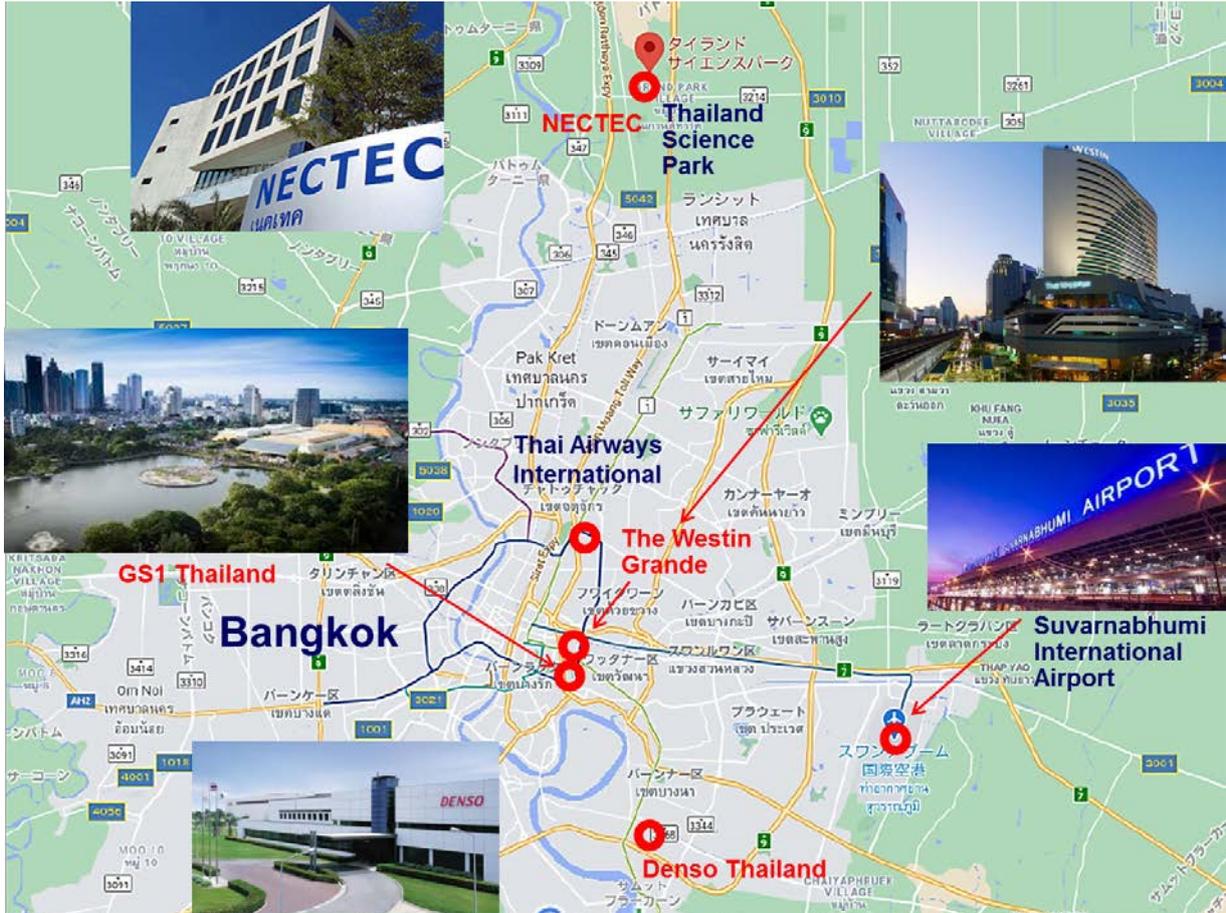
2008.07.29 10:00-13:30 Meeting with GS1, Thai airways and NECTEC

2008.07.30 10:00-14:30 DENSO Thailand

2008.07.30 Bangkok ⇒ Chubu (+1)

2008年7月28日~31日の日程でタイのバンコクを訪問した。バンコクへはQRコードの普及のために、NECTEC 同席のもと、GS1 タイランド、タイ航空に対して、QRコードのプレゼンテーションを行った。また DENSO タイのトップとも今後のビジネスに関して打ち合わせを行った。



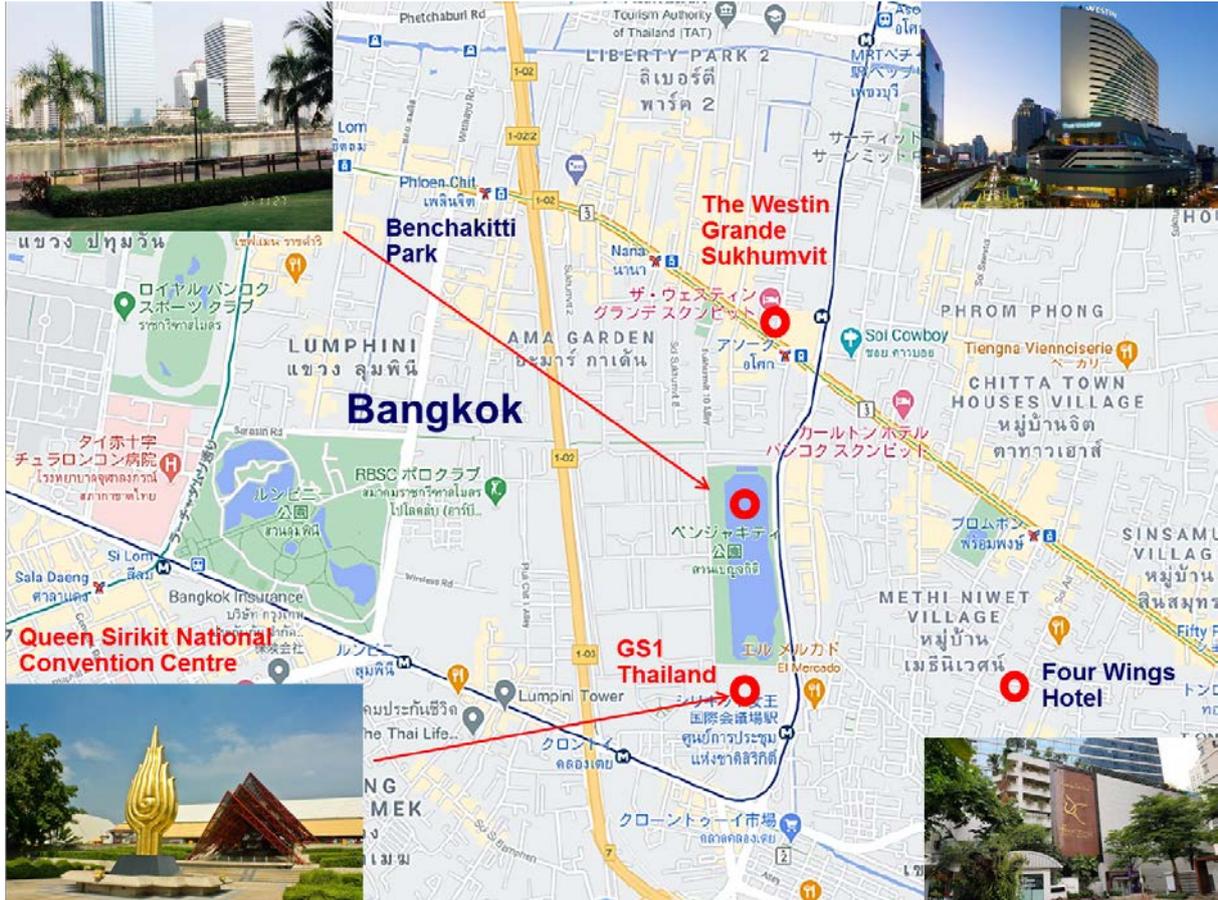


Suvarnabhumi International Airport

The Westin Grande Sukhumvit



The Westin Grande Sukhumvit

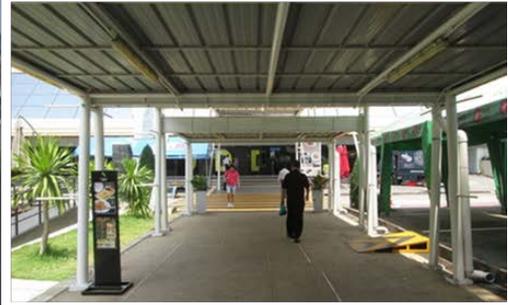


GS1 Thailand





GS1 Thailand



Queen Sirikit National Convention Centre



DENSO WAVE 1

QR Code Features

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

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DENSO WAVE 2

About 2D Symbology

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

Linear Symbol

Information →

↑ No Information

2D Symbol

Information →

↑ Information

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

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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

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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.

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DENSO WAVE 5

QR Code Features

High Data Capacity
Up to 7089 char. (numeric)

0123456789 0123456789
0123456789 0123456789
0123456789 0123456789
0123456789 0123456789
0123456789 0123456789

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.

株式会社デンソー
電子応用営業部
愛知県刈谷市
昭和町1-1

Damage Proof
Even 30% damaged code can be read.

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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	

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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

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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

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