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2000. 12 . 31 .

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1. : .
2. : 2000.1.1 2000.12.31
3. :
- 4.
- 가.

		1	2	3	4	5	6	7	8	9	10	11	12	
가. o o NVLAP 가 o TCB o o R&TTE Directive o APEC TEL MRA o APEC MRA o EU MRA o MRA o o MRA														
(%)		25		25		25		25		25				

.

1)

- o .
- o NVCASE, NVLAP 가 .
- o TCB .

2)

- o .
- o R&TTE Directive .

3)

- o APEC TEL MRA
- o APEC MRA
- o EU MRA
- o MRA

5.

- o
- o 가 MRA

6.

- o 가
- o

# SUMMARY

The R&TTE sector is rapidly globalizing and Globalization forces regulatory reform. Around the world, wealth of technical regulation such as diverging administrative provisions, technical requirements, conformity assessment procedures hampers trade. In order to reduce these technical barriers and facilitate trade, Mutual Recognition Arrangement is being promoted around the world. Foreign countries such as U.S.A, EU, Japan revised their certification system in order to implement MRA. Recent trends related to certification system is decentralization of the certification of products from government to third parties or bodies to the manufacturer himself, from pre-market approval to post-market surveillance. Especially EU emphasis that the reduction of the trade barriers is best served by the process of the deregulation.

We have felt the need to improve our certification system in order to implement MRA and correspond trends of the world . So we studied on certification system of information and communication in U.S.A and EU, then suggested the improvement directions in certification system. Also, with regard to MRA we analyzed trends of the world and suggested the promotion directions of MRA.

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1.	.....
2.	.....
3. TCB	.....
4.           가           가	.....
3 . EU	.....
1.	.....
2.	.....
3. R&TTE Directive	.....
3 .	.....
1 .	.....
1.	.....
2. WTO/TBT	.....
3. WTO/TBT	.....
2 .           (MRA)	.....
1. MRA	.....
2. APEC TEL MRA	.....
3. MRA	.....
3 .           (Deregulation)	.....
4 .	.....
	.....

[ 1]	EU	.....	
[ 2]		.....	
[ 3]		.....	
[ 4]		.....	
[ 5]	NVCASE	NVLAP	.....
[ 6]	FCC		.....
[ 7]			.....

[	1]	.....
[	2]	.....
[	3] TCB	.....
[	4] EU	.....
[	5] EU	.....
[	6] EU	.....
[	7] R&TTE Directive	가 .....
[	8] 가 가	.....
[	10] CE	.....
[	10] MRA	.....
[	11] MRA	.....
[	12] APEC TEL MRA	.....
[	13] CAB	.....
[	14]	.....

# 1 .

1995 (WTO)<sup>1)</sup>가

. (TBT)<sup>2)</sup> , 가  
가

.  
(MRA)<sup>3)</sup> . 가 MRA  
가 .

가  
가

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MRA

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MRA

MRA

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MRA

APEC TEL ASEM TFAP<sup>4)</sup>

가

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가 MRA

가

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1) WTO : World Trade Organization

2) TBT : Technical Barriers to Trade

3) MRA : Mutual Recognition Arrangement

4) TFAP : Trade Facilitation Action Plan



가 MRA

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MRA

가 MRA

MRA

MRA

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## 2 .

### 1 .

MRA  
(ISO/IEC 가 )  
가  
.  
EU [ 1]  
[ 1] EU

가		
		- FCC : - : FCC Part 2,68
		- NIST/ ITL : - NMLAP, NMCASE :
		- CEC( ) (Global Approach) ,
		- ECITC( ) : - BG- IT 226 : - ECITC (Agreement Group) .

FCC CFR 가 , FCC

가 DoC<sup>5)</sup> Verification .  
EU TTE Directive R&TTE Directiv  
e<sup>6)</sup> EU 가

5) DoC : declaration of Conformity

EU

2 .

1.

가.

1934

(1996 )

(CFR) Title 47 .

Title 47

Part 0, Part 2, Part

15, Part 25, Part 68

[ 2]

Part	Section	
Part 0 FCC	§ 0.241	, EMC OET <sup>7)</sup>
	§ 0.291	CCB <sup>8)</sup>
Part 2	§ 2.960	TCB <sup>9)</sup>
	§ 2.962	TCB
Part 15	§ 15.101	
Part 25	§ 25.200	GMPCS
Part 68	§ 68.160	TCB
	§ 68.162	TCB

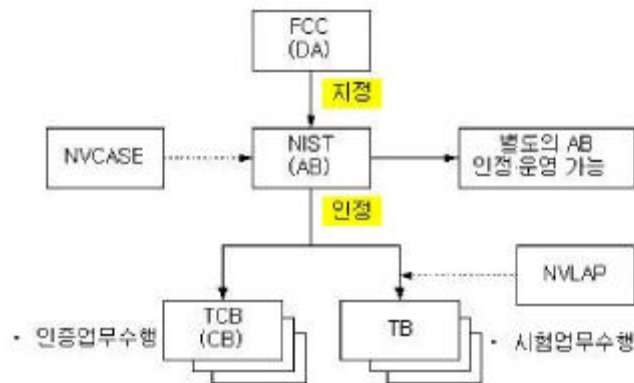
6) R&TTE Directive : Radio and Telecommunication Terminal Equipment Directive

7) OET : Office of Engineering and Technology

8) CCB : Common Carrier Bureau

9) TCB : Telecommunication Certification Body

가 FCC TCB  
 , FCC  
 , CFR  
 2000 TCB FCC  
 NIST , NIST NVCASE<sup>10)</sup>  
 TCB NIST  
 가 NVLAP<sup>11)</sup> TCB ISO/IEC 가  
 65 25 , NIST MRA  
 ISO/IEC 가 65 58



[ 1 ]

[ 3 ]

	(DA)	FCC	o
	(AB)	NIST	o AB 가 o NVCASE 가
(CAB)	(CB)		o
	(TB)		o o NVLAP 가

10) NVCASE : National Voluntary Conformity Assessment Systems Evaluation

11) NVLAP : National Voluntary Laboratory Accreditation Program

2.

가.

1949

12)

1987

13)

NIST ITL

(IFIPS) 2

The

Tolly Group, Silicon Valley Networking Lab(SVNL), National Software Testing Laboratories(NSTL), LANQuest Lab

OSI TCP/IP

(IGOSS)'

NVCASE

가.

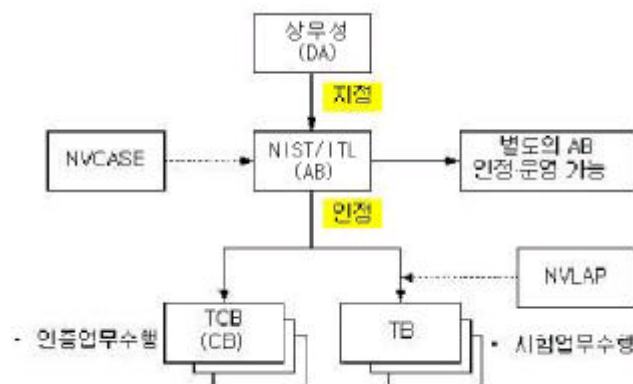
, EU

1994

NIST가

. NVLAP

NIST



[ 2]

12)

: Federal Property and Administrative Services Act

13)

: Computer Security Act

[ 4]

(DA)		o
(AB)	NIST/ ITL	o AB 가 o NCASE 가
(CAB)	(CB)	o
	(TB)	o o MLAP 가

### 3. TCB

#### 가. TCB

가

FCC

FCC

TCB FCC

. 1998. 5 FCC 1998. 12 .

FCC TCB 2000.1 “The FCC's

New Enforcement Ethic” FCC가

. FCC 2

(compliance)

Rocket Docket

. FCC (Enforcement

Bureau) FCC

. FCC

. NPRM<sup>14)</sup> 5/ 15 ,

1) TCB ( )

2) DoC(Declaration of Conformity) ( )

14) NPRM : Notice of Proposed Rule Making

- 3) Verification ( )
- 3가 , ,
- 1) ANSI SDO<sup>15)</sup>
- 2) 가
- 가 (PSTN)<sup>16)</sup>
- 3) 가 Rule making FCC
- Rule
- 3가 .
- TCB
- FCC FCC가 30
- 가 . (post-market
- surveillance) , type testing
- . TCB .
- o TCB 内
- FCC
  - ISO 가 65 ( )
  - 
  - 30
- o TCB 外
- FCC Rules
  - (enforcement) ( FCC 가 )
  - Rule
  - 30 (FCC 가 )
  - (Grantee)

---

15) SDO : Standard Development Organization

16) PSTN : Public Switch Telephone Network

. TCB  
TCB

- o 가
  - 1GHz ( ),  
(PC , TV  
) , ISM ( , )
  - 1GHz ( )
  - 가 PCS
  - 가 가 (UNII)<sup>17)</sup>

- o 가
  - 47 CFR Part 22(cellular), 24, 26, 27
  - 47 CFR Part 22(non-cellular), 72, 90, 95, 97
  - 47 CFR Part 80, 87
  - 47 CFR Part 21, 74, 101

o 47 CFR Part 68

가 PCS , UNII , RF  
Exposure 가 FCC TCB  
FCC 가  
TCB TCB 가 .

4. 가 가

가. NVCASE

NVCASE NIST 가

---

17) UNII : Unlicensed National Information Infrastructure



가 CFR Title 15 Part 286  
NIST  
가 , ,  
NIST 가 가 가  
가 가  
NIST  
가  
(recognition) (certificate)  
가 가  
가 가  
가 가  
NVLAP  
NIST가 NVLAP ,  
NVLAP ,  
, ISO/IEC Guide 25 ISO 9002  
CFR Title 15 Part 285 가  
가  
NVLAP 가 , ,  
가  
가  
가  
NVLAP

가 .

NVLAP CFR Title 15 Part 285(National Voluntary Laboratory Accreditation Program Procedures and General Requirements)

NVLAP , ,

NVLAP . 가

. CFR Part 285가

.

o NVLAP 1976.2.25 Federal Register

o 1984.12.10

- LAP , 가 LAP

-

- ISO Guide 25

- NVLAP 가

o 1990.9.12

- 1988 NBS가 NIST

o 1994.3.

- LAP

-

가

- ISO ( , ISO Guides 25, 38, 42, 58 ISO 9000 ) . NVLAP

ISO Guide 58 NVLAP 가

ISO Guide 25

-

NVLAP NIST

- o Subpart A : NVLAP
- o Subpart B : LAP , , ,
- o Subpart C :
- o Subpart D : NVLAP

. NVCASE NVLAP

# [ 5] NVCASE NVLAP

	NVCASE	NVLAP
	o 가 가 o 가 가	o
가	o 가 가 o 가 o NVCASE 가 NIST가	o 가 o 가 NLAP 가 o 가 가 , , o o o NLAP 가



5.

ET Docket No. 97-94<sup>18)</sup> TCB (GEN Docket  
 98-68) Certification, DoC, Verification  
 . Certification FCC , DoC  
 Verification . Certification, DoC Verification  
 [ 6] , [ 7]  
 .  
 [ 6] FCC

		FCC
Certification	o , FCC	
DoC	o o NIST A2LA가 가	
Verification	o o 가	

18) ET Docket No. 97-94

- o Type acceptance, Certification, Notification, DoC, Verification Registration  
 Certification, DoC,
- Verification Registration
- o DOC Verification

[ 7]

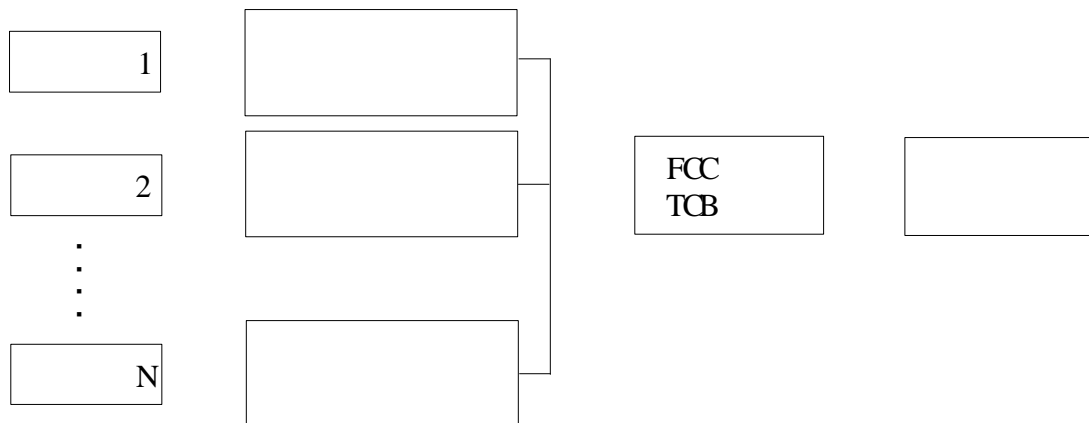
Most transmitters	Certification
Scanning Receiver	Certification
CSTD	DoC
PC's peripherals	DoC
Most receivers	DoC
TV interface device	DoC
Consumer ISM (Part 18)	DoC
Other ISM eqpt (Part 18)	verification
TV & FM receivers	verification
All other ITE	verification
Pt to pt Microwave	verification
Broadcast transmitters	verification
Aux. BC transmitters	verification
INMARSAT equipment	verification
106 MHz ELT	verification
Cable TV Relay xtms	verification
Wildlife tracking xtms	verification
Telephone Term eqpt	Certification

(TCB) Certification

FCC TCB . Certification

(FCC TCBs)

[ 3]



[ 3] TCB

### 3 . EU

1.

가.

o (CEC Directive 86/361/EEC) :

NET

o (CEC Directive 91/263/EEC) :

CTR CTR

TRAC<sup>19)</sup> , ACRE<sup>20)</sup>

.

(CEC)<sup>21)</sup>

MSA<sup>22)</sup> CEC

.

CEC

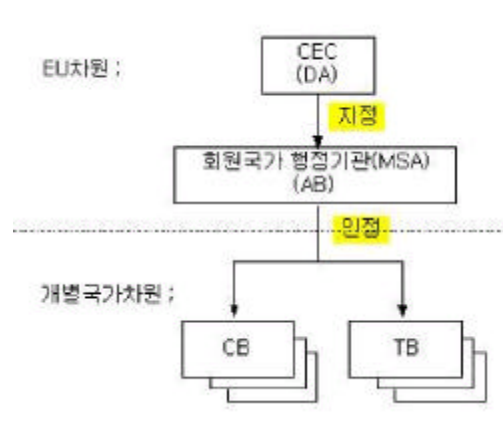
.

19) TRAC : Technical Regulations Application Committee

20) ACTE : Approval Committee for Terminal Equipment

21) CEC : Commission of the European Communities

22) MSA : Member State Administration



[ 4] EU

(Type Examination),  
 (Production Quality Assurance), (Product Checks),  
 (Full Quality Assurance) 4가 1989 12  
 (Global Approach)  
 (Global Approach)  
 가 1990 12 EU 가  
 (EOTC)<sup>23)</sup> EU  
 1993 8  
 ( )  
 CE ,  
 (4 ),  
 (stick) 3가 가  
 , /

23) EOTC : European Organization for Testing and Certification



2.

가.

(CEN), (CENELEC),  
(CEPT)가 M-IT -03  
. CEN  
(ECITC) 'CEN-ECITC Project Team 1'  
'BC-IT 226(Bon de Command-Information Technology)'

EU ECITC가 , ECITC  
가  
(Agreement Group)

o OSTC : WAN OSI

o ETCOM : LAN OSI

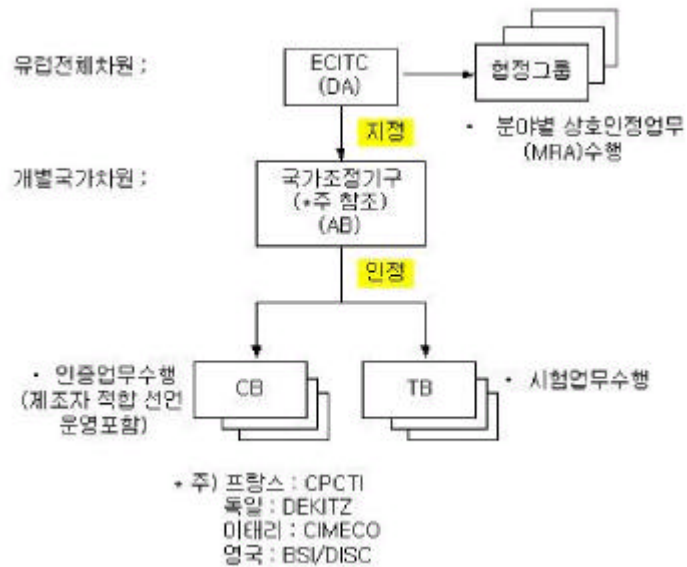
o EMCIT : EMC

o ITQS :

가 가 ,  
가 .

(Declaration of Conformity)

, 가



[ 5] EU

### 3. R&TTE Directive

#### 가. R&TTE Directive

(EC) 1993.1.1, 1994 1  
(EU) 가 . EU 가 EU  
/

EU (Directive) R&TTE Directive, EMC Directive, Low Voltage Directive, Car Directive, Wheel Directive, Machinery Directive, Medical Directive, Safety of Toys ,

#### o R&TTE Directive

- 
- ETSI<sup>24)</sup> (EU )
- EU 가

24) ETSI : European Telecommunication Standard Institute ( )

o EMC Directive (Electromagnetic Compatibility)

- EMI(Electromagnetic Interference)
- EMS(Electromagnetic Susceptibility)

o Low Voltage Directive

- DC 75V, AV 50V

EU New R&TTE Directive 가

TCF Notified Body .

EU Directive 1999/5/EC

TTE Directive 2000.4.8 “R&TTE Directive” . R&TTE

Directive EU Type Approval

가 , 가 (National Approval)

(Manufacturer) 가

EU . Directive

o EU

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o EU 가

R&TTE Directive ,

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o , Directive

R&TTE Directive

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R&TTE Directive

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(Market

surveillance)

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· R&TTE Directive

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Low Voltage Directive Safety

EMC

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LVD

SAR(Specific Adoption Rate) 가 .

가

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가

가

가

(Manufacturer) 가 EU

가

(Declaration of conformity)

가(Member State)

R&TTE Directive 가

가

R&TTE Directive

가 가 (2000.4.8 TTE Directive 1

가 가 ).

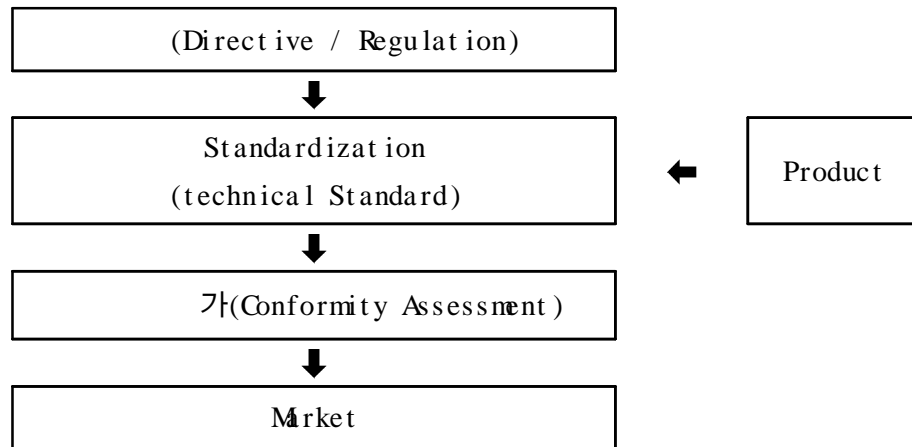
가

가

EU

가

4 EU [ 6]



[ 6] EU

R&TTE Directive 가 Annex , , , 4가  
 . [ 7] [ 8] ,  
 .

[ 7] R&TTE Directive 가

Annex	Annex	Annex	Annex
CE Mrking	CE Mrking	CE Mrking	CE Mrking
Declarat ion of Conformity	Declarat ion of Conformity	Declarat ion of Conformity	Declarat ion of Conformity
Technical Documentat ion (Test Reports)	Technical Documentat ion (Test Reports)	Technical Documentat ion File	
	Radio Test Suites	Radio Test Suites	
			Evaluation of Full Quality System
Mrking	Mrking	Mrking	Mrking



CE + (NB Nb.)

CE +(NB Nb.)  
+Equip. ident .



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GSM  
DECT Phone

CT0, SRD(Short  
Range Device)

[ 8] 가 가

	Annex	Annex	Annex	Annex
Modem/Phone	✓		✓	✓
Radio Harmonized		✓	✓	✓
Radio Non Harmonized			✓	✓

+ *EM C and Safety(Health)*



Radio Harmonized : EU . (DECT, GSM )

Radio Non Harmonized : . , 가  
가 (PMR, SRD, Analog Cordless Phone )

o Annex

가

(Technical

Documentation)가

10

, . .

- General description of the equipment
- Design and manufacturing drawings
- Schemes of components, circuits, etc.
- List of standards applicable and/or description of the technical solutions adopted
- Results of calculations made, etc.
- Test reports

o Annex III

Annex Radio Test가 가 DECT, GSM

o Annex IV

Notified Body TCF(Technical Construction File)

10

가 가 가가 , PMR,  
SRD, TCF

- Declaration of Conformity
- Certificate of Conformity / Expert Opinion Notified Body
- Test Reports Accredited Test Lab.
  - Safety/Health
  - EMC
  - RF/Telecom.
- Technical Documentation

o Annex V

(Full Quality Assurance, FQA) , , ,  
QA가 Notified Body

o Application Form

o User Manual

o General Product Description type, model, brand, HW/SW version,  
product variants, intended purpose, special purpose







CE 0682



EU



Class Identifier

Notified Body

[ 10] CE

(1) Test House

Testing, Essential Requirements, Market Surveillance

가 Test 가

Test report

(2) Notified Body

Expert Opinion

(3) Market Surveillance

R&TTE Directive 가

(4) Network Operator

, Network

(5) ETSI

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TTE Directive

가

, R&TTE Directive 가

. 2000

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o

o EU 가

o EU 가

o

. R&TTE Directive

R&TTE TTE Directive

가

가

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R&TTE Directive가

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EU

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가가

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Test House

3

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1. .

1. .

(TBT)<sup>25)</sup> ,

(Standard), (Technical Regulation), (Certification Procedure), (Inspection System) ,

. , EU , 가 DIN, NF, BS 가 , 가 .

가가 , , 가 , .

GATT						
	1979.4.12		GATT/TBT			
1980.1.1	.	가	가	,	,	38
가	1980.10.2	가	.	1986	1994	
	GATT	가	WTO			
WTO/TBT			.			

25) TBT : Technical Barriers to Trade

### 3. WTO/TBT

가.

가

가

가

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WTO

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 1 (Enquiry Point)  
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 o 가  
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 o , , 가  
 가  
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 o  
 (CTBT)<sup>26)</sup> (Working Parties),  
 가 (Technical Experts Group), (Panel) .

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26) CTBT : Committee on Technical Barriers to Trade

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가

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○

가

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가

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2 .

(MRA)

## 1. MRA

MRA<sup>27)</sup>

가가

가

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가

가

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, MRA

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가

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MRA

가

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3가

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MRA

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27) MRA : Mutual Recognition Arrangement



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가

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MRA

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, 1

MRA

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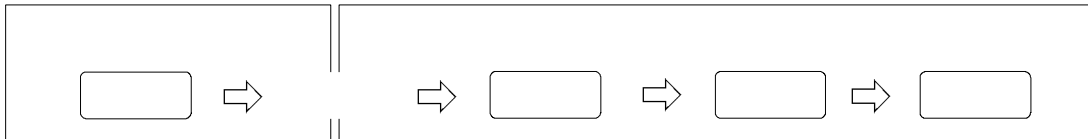
”

MRA

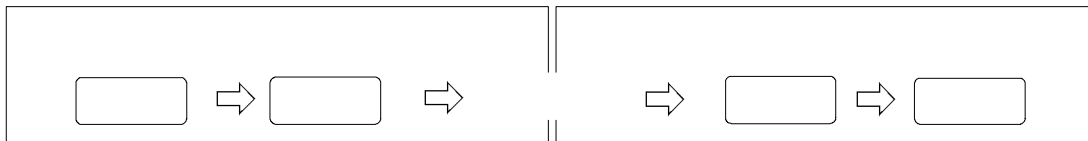
[ 10]

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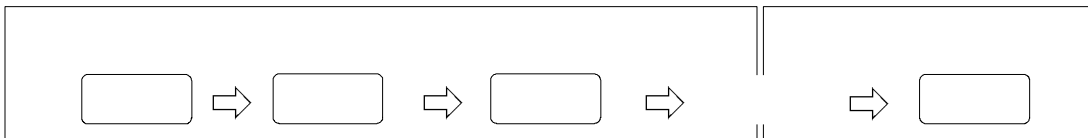
[MRA ]



[ 1 MRA]



[2 MRA]



[ 10] MRA

MRA

[ 11]

. MRA

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3가

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MRA

MRA

가

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(1999.10.1)

- : (2000.5.22)
- o MRA 가
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- 가
- 
- 가 APEC TEL MRA

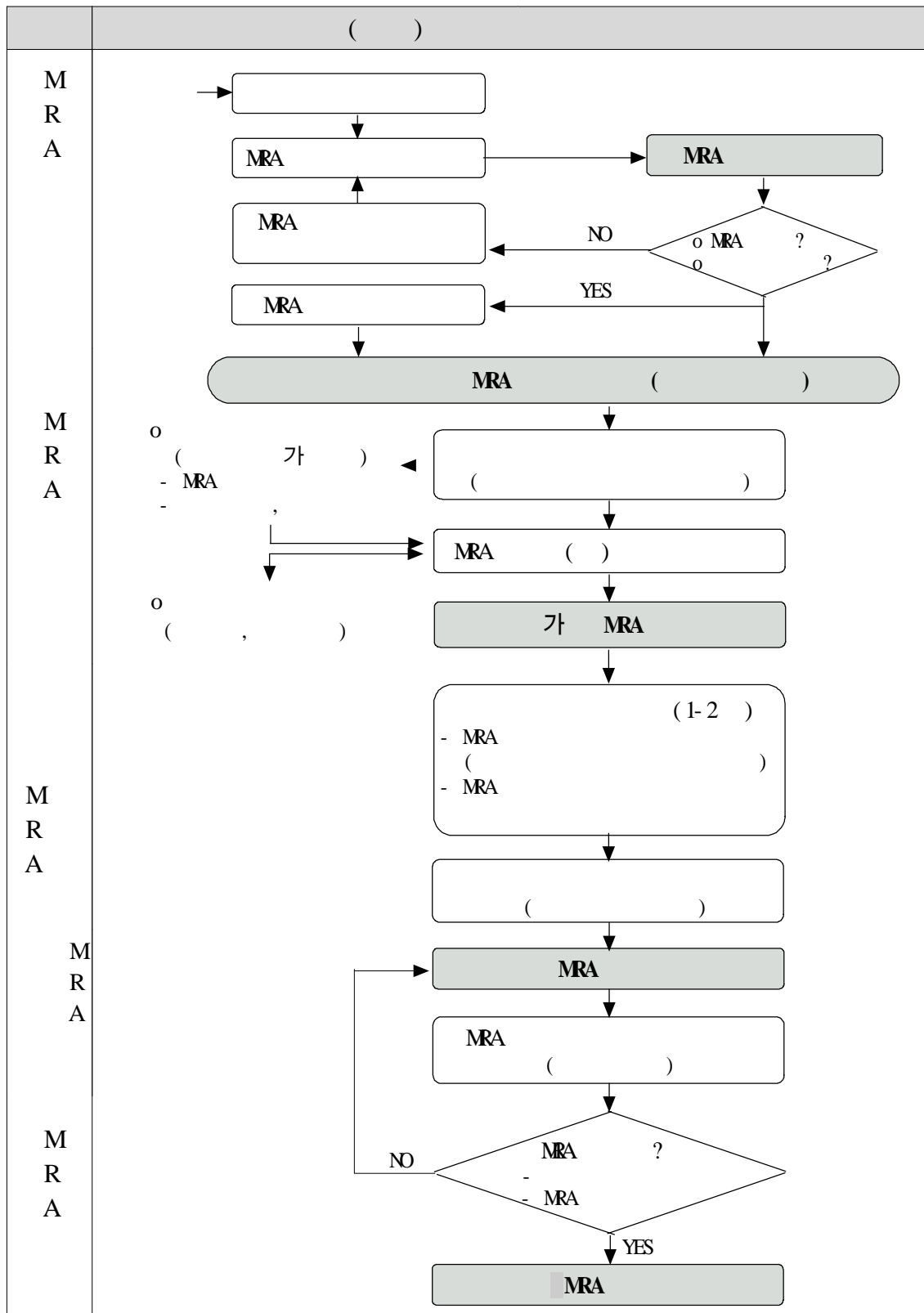
MRA , MRA

- o :
- o MRA : MRA ,
- o
- 가 (CAB) 가 ,
- 
- 
- o MRA ( )
- , ,
- o MRA

MRA

- o MRA
- MRA
- 
- MRA

[ 11] MRA



가 MRA

가 MRA

## 2. APEC TEL MRA

가.

APEC<sup>28)</sup> 가

1989.11.6 . 3 APEC

(1998.6.2 5, 가 ) MRA

1999.7.1 APEC MRA가 .

APEC MRA ,

가 .

MRA APEC TEL

, APEC TEL MRA

[ 12] .

o 1995.11 APEC ( / ) MRA

o 1997.9 16 APEC TEL ( ) MRA ( )

o 1997.11 APEC ( )

9 MRA

o 1998.4 6 APEC MRA ( )

o 1998.6 3 APEC ( 가 ) MRA

MRA ( )

o 1999.7.1 APEC MRA

APEC MRA .

o : 1999.7.1 MRA

o : MRA

MRA

o : . ,

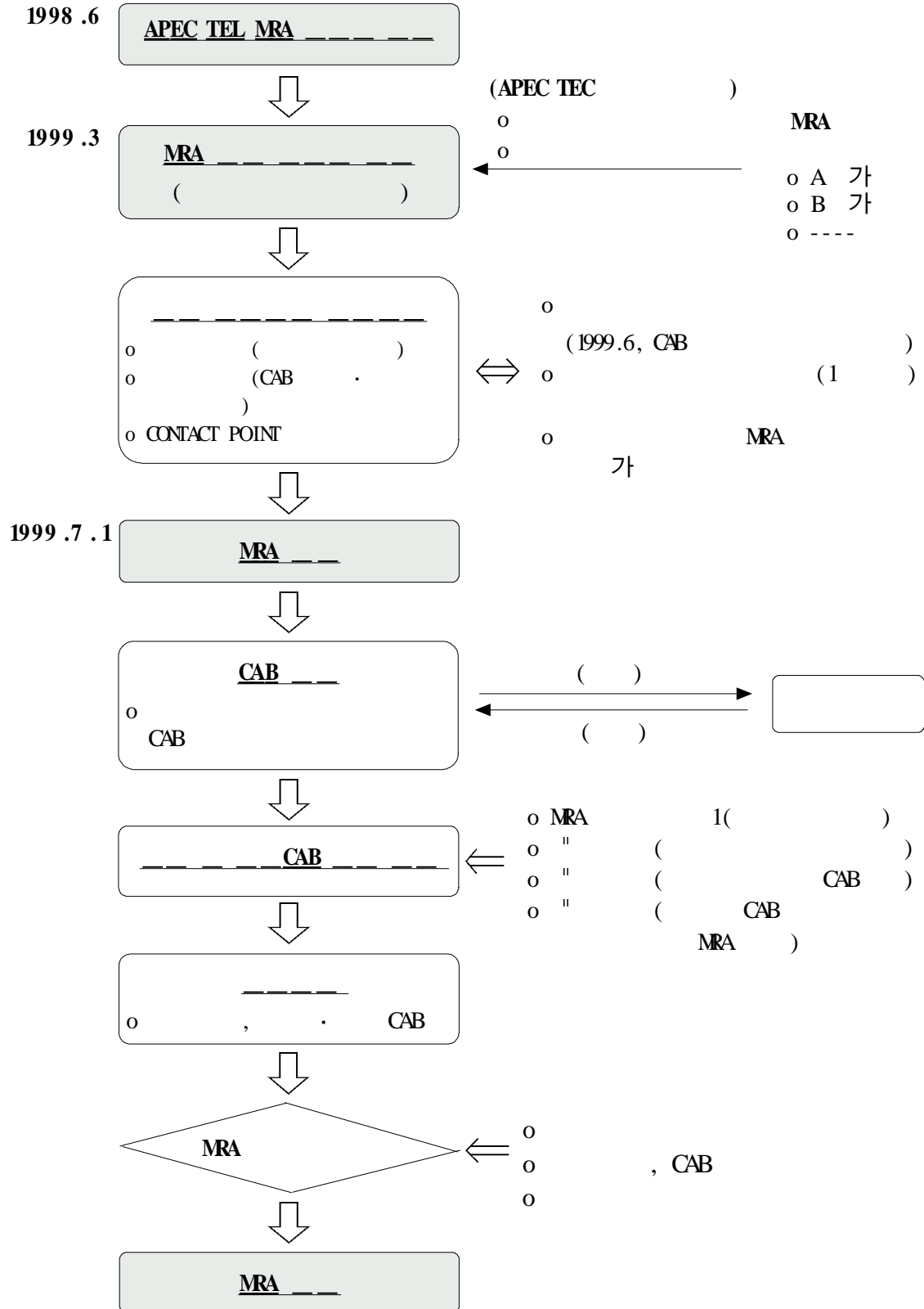
.

o : (EMC )

o ISO/IEC 가

28) APEC : Asia-Pacific Economic Cooperation( - )

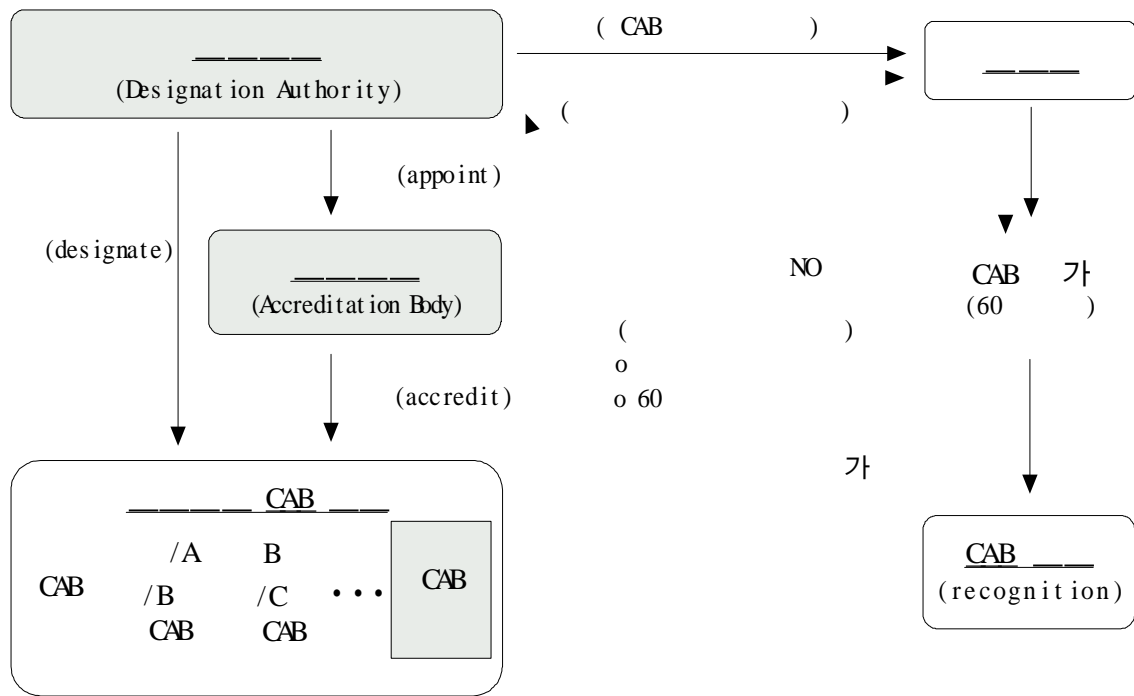
[ 12] APEC TEL MRA



. 가 (designation) (recognition)  
 가  
 . (Designation Authority)  
 가 가 (CAB)<sup>29)</sup>  
 . (Accreditation Body)  
 가 APLAC<sup>30)</sup> MRA .  
 가 가  
 3 , ,  
 . , 가 APEC MRA 가 ,  
 가 1 , 가  
 2 .  
 CAB  
 (designation) CAB 가  
 가 CAB (recognition) . CAB  
 , CAB (accreditation)  
 . CAB  
 ,  
 ( 가 ), , ISO/IEC 가  
 25( ), ISO/IEC 가 58( ), ISO/IEC 가  
 65( ), ISO/IEC 가 61, 62( )  
 . [ 13] CAB

29) CAB : Conformity Assessment Body

30) APLAC : Asia-Pacific Laboratory Accreditation Cooperation



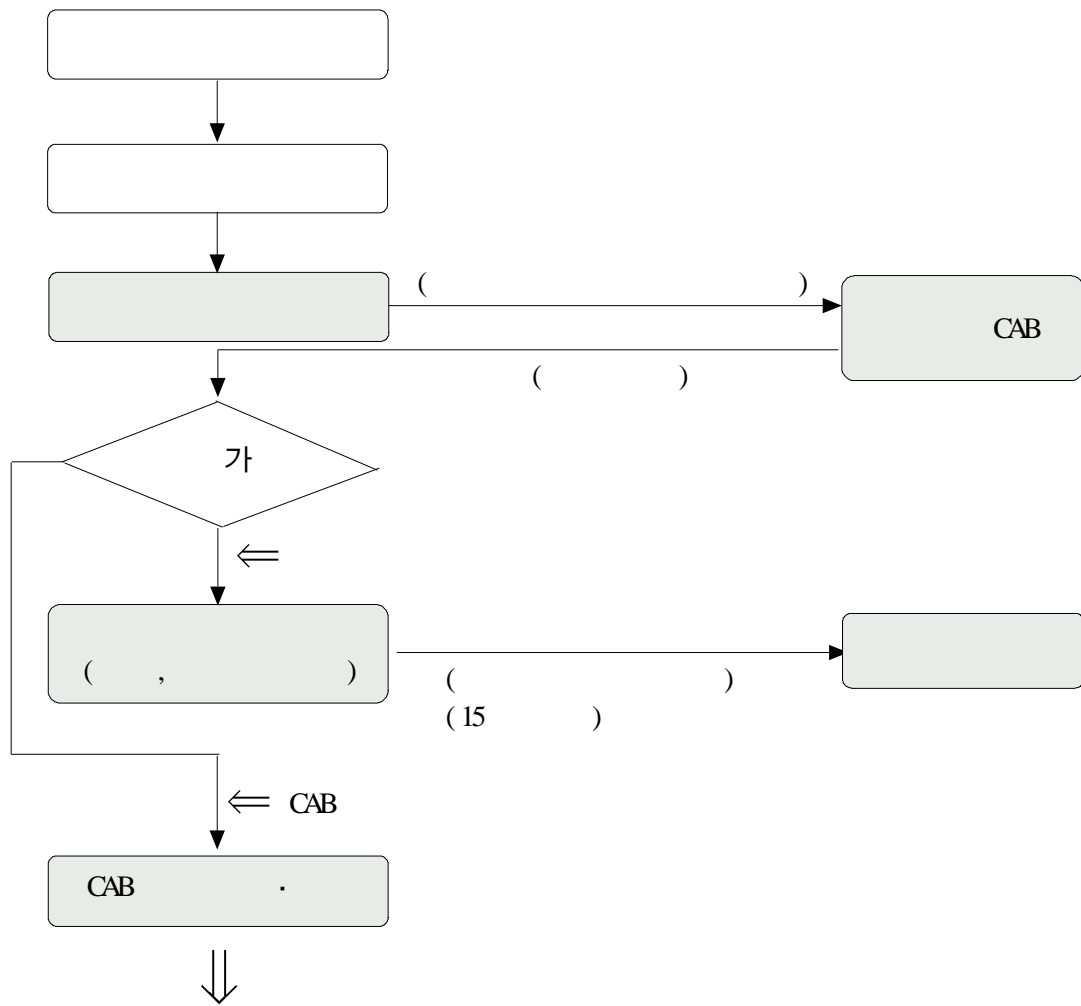
CAB : Conformity Assessment Body ( 가 )  
 1 MRA 2 MRA

[ 13] CAB

가  
[ 14] CAB

CAB

CAB



CAB  
: CAB 가



### 3. MRA

## 가. APEC

MRA

APEC

APEC MRA

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■

EMC,

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가

(ISO/IEC) 가

. APEC

1998.6 가

. APEC

MRA

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가

ISO/IEC

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APEC

1999.7.1

가

APEC MRA

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6

. APEC

MRA

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WTO/TBT

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6 3

. TBT

6 3

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33

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EU

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1997.6.20

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