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ABSTRACT

We carried out this research to improve domestic approval systems and approval & testing fees of the information and communications equipments with worldwide level. For the purpose of conducting this research, we collected and analysed not only the domestic approval systems such as type approval for the wired or wireless communications equipments, type registration and EMC registration, but also those of foreign countries.

In this research, we proposed a new regulations on the approval of the information and communications equipments so as to cope with the international trend of propelling the active MRA with other countries, and unify the related regulations as single regulation for the smooth management process and user's convenience, and we suggested the calculation standards and methods of the approval and testing fees for communications equipments.

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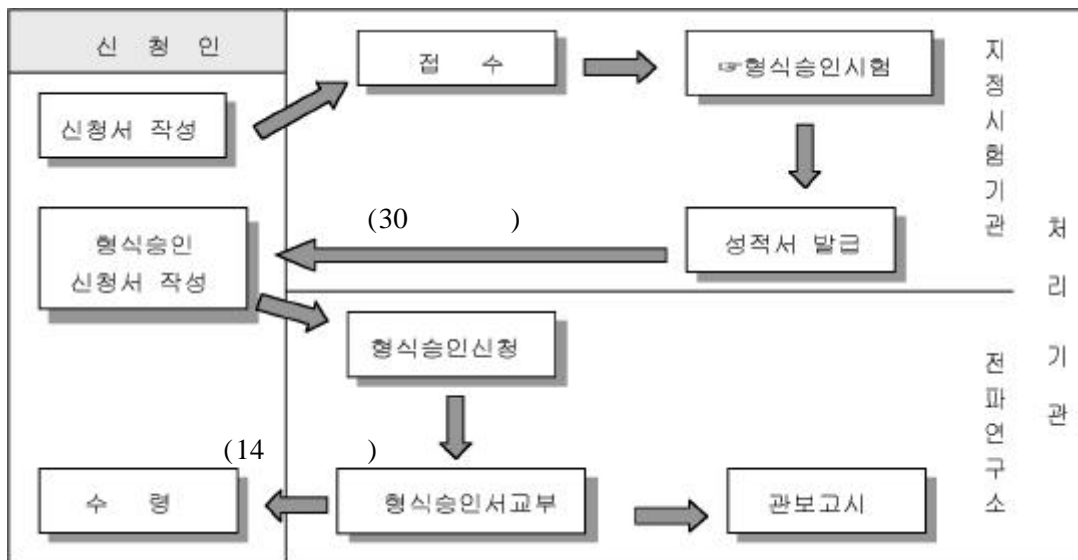
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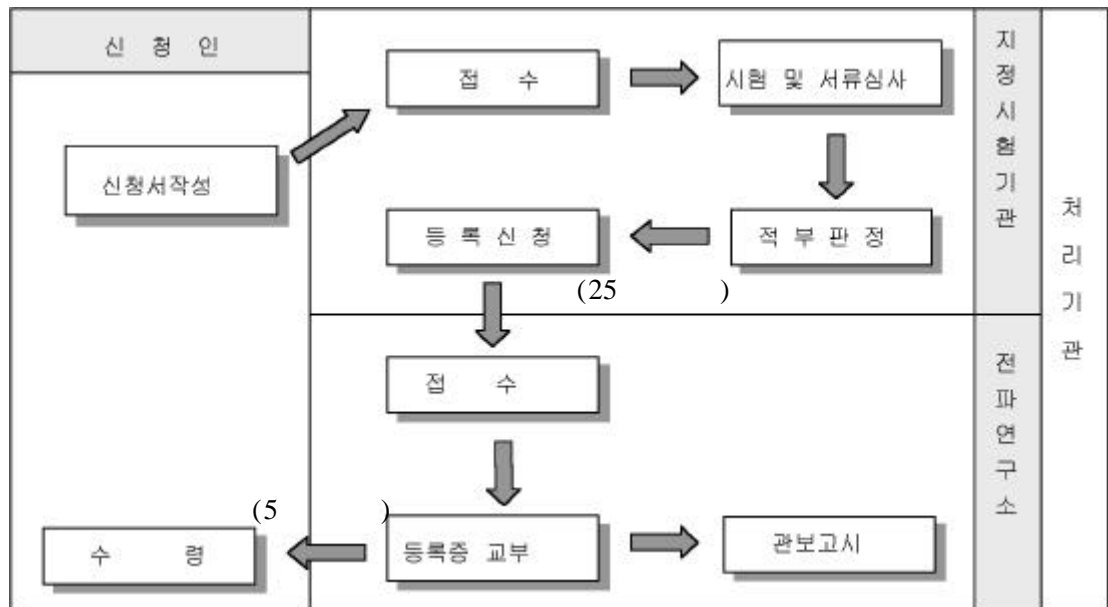
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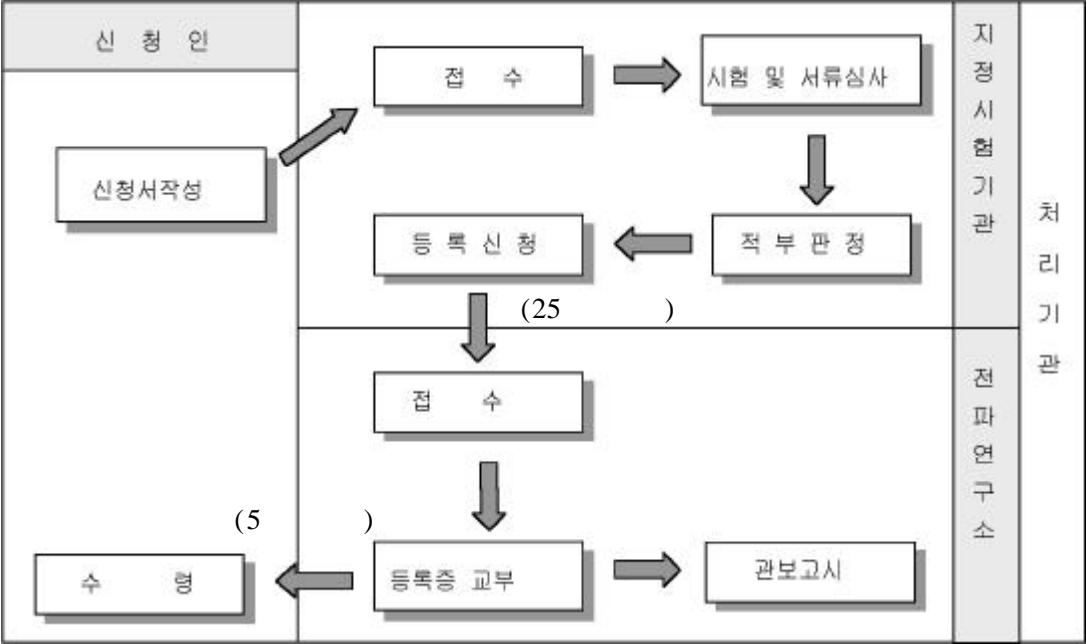
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 FCC Part 0, 2, 15, 25, 68
 , GEN Docket No 98- 68 1998.12.17
 1998.12.23 . (GEN
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 o TCB¹⁾
 o 가 NIST²⁾
 o MRA 가
 o TCB
 - TCB : ISO/IEC 가 25 65
 - : ISO/IEC 가 58 61

1) TCB : Telecommunications Certification Body ()

2) NIST : the National Institute of Standards and Technology()

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(Designation Body) TCB

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FCC가

Certification

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Type Approval, Type

acceptance, Certification, Registration, Notification, DoC Verification

ET Docket No. 97- 94³⁾

TCB

(GEN Docket 98- 68)

Certification, DoC,

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3) ET Docket No. 97-94

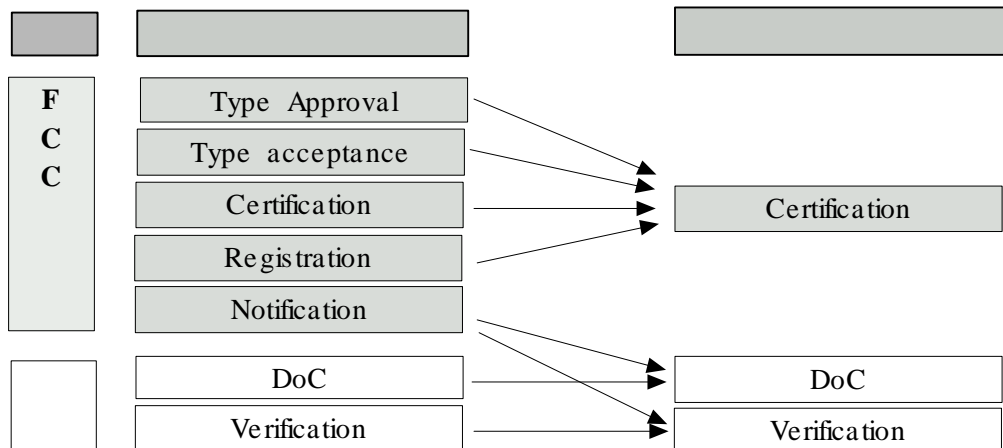
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Type Approval, Type acceptance, Certification, Registration, Notification, DoC Verification 2- 12

[2- 12] FCC

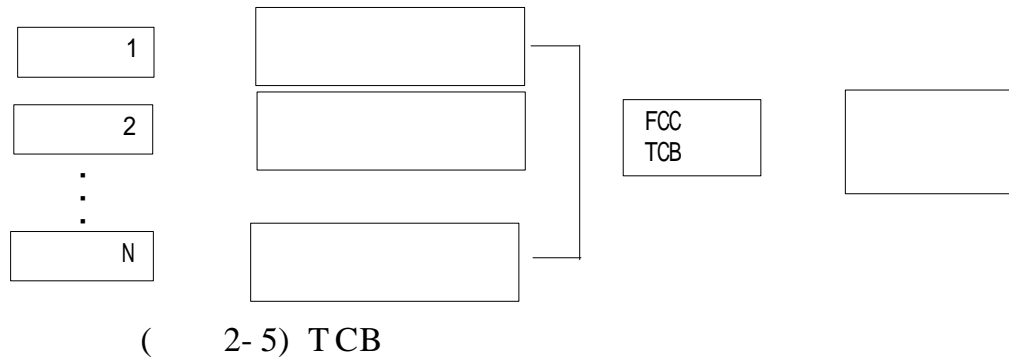
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| Type Approval () | - FCC () FCC Certification (62FR10471, Mar. 7,1997 ET Docket No.97- 94) | - |
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| Certification () | - , , FCC | - |
| Registration () | - , , Certification FCC (GEN Docket 98- 68) | - |
| Notification () | - (report) FCC FCC가 DoC Verification FCC (ET Docket No. 97- 94) | - (report) |
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| Most transmitters | Certification |
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| 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 & FMreceivers | 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 xtmrs | verification |
| Wildlife tracking xtmrs | verification |
| Telephone Term eqpt | Certification |

(TCB) Certification
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Certification

(FCC TCBs)

FCC 47 USC 158, 159, FCC PART 1
 , Application processing fees() Annual
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 , annual regulatory fees() FCC , ,
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 Application processing fees()

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| | FCC Form No. | Fee |
|---|-------------------|----------|
| Common Carrier Services - Telephone Equipment Registration | FCC 730 & FCC 159 | \$200.00 |
| - CERTIFICATION: | | |
| a) All Receivers (except TV and FM) | 731 & 159 | \$365.00 |
| b) Devices under Parts 11, 15 & 18(except receivers) | " | 940.00 |
| c) All other Devices | " | 475.00 |
| d) Modification and Class II Permissive Changes | " | 45.00 |
| e) Request for confidentiality() | " | 135.00 |
| - ASSIGNMENT OF APPLICANT CODE () | " | 45.00 |

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Industry Canada(
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CP- 01(Certification Procedure- 01) RSP- 100(Radio Sta-
ndards Procedures- 100) .

[2- 15]

- - CP- 01 : CP : Certification Procedure
 - CS- 02 : (2 /4)
CS : Certification Standards()
 - CS- 03 : (PSTN, DS1 , ISDN)
 - CS- 04 : (Paging)
 - CS- 05 : ()
 - IS- 01 : (/)
 - (TRC : Teleco Regulation Circulars)
 - TRC- 49
 - TRC- 34, 43, 46, 55, 56, 57, 72, 75, 77, 81
- - RSP 100 : RSP : Radio Standard Procedure
 - RSP 101 : 960MHz
 - RSP 110 :
 - RSP 113 : 960MHz
 - RSP 114, RSP 116
 - RSS 117 ~ 210
RSS : Radio Standard Specification
 - RIC 1~66 (RIC : Radiocommunication Information Circulars)
 - CPC 2- 0- 01~CPC 2- 6- 06
CPC : Client Procedure Circulars
- EMI
 - ICES- 001 : EMI (, ,)
 - ICES- 002 : EMI ()
 - ICES- 003: EMI ()
 - ICES- 004: EMI ()
 - EMCAB- 1 : 0.010- 10,000MHz /
 - EMCAB- 2 :
 - EMCAB- 3 : ICES- 003
ICES : Interference- Causing Equipment Standard(EMI)
EMCAB : ElectroMagnetic Compatibility Advisory Bulletin(EMC)
- - BPR : (BPR : Broadcast Procedures and Rules)
 - BP- 23 : (BP : Broadcast Procedures)
 - BP- 23 : (BP : Broadcast Procedures)
 - BTS 1- 1, 1- 2, 3, 14 :
 - RSS- 150,153,154 :
 - TB- 1 ~ 4 :

CP- 01(Certification Procedure- 01)
RSP- 100(Radio Standards Procedures- 100)



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TRC- 49(Telecommunications Regulation

Circulars)

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(certification fees),

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| | FEE |
|---|--------|
| 1. Land or Marine communications apparatus or mobile station | \$ 900 |
| 2. Cellular communications apparatus, single mode | 900 |
| 3. Cellular communications apparatus, dual mode | 1,200 |
| 4. Aeronautical communications or navigation apparatus | 800 |
| 5. Emergency Position Indicating Radio Beacons or Personal Locator Beacons | 1,000 |
| 6. Emergency locator transmitters, land or marine | 300 |
| 7. Radar | 800 |
| 8. General radio service apparatus | 550 |
| 9. Cordless telephones (radio portion) | 350 |
| 10. Low Power License Exempt apparatus | 425 |
| 11. AM, FM or TV broadcasting apparatus | 450 |
| 12. Terminal equipment, single- line and component devices | 570 |
| 13. Terminal equipment, multi- line devices | 1,100 |
| 14. Terminal equipment, telex devices | 475 |
| 15. Apparatus not otherwise herein described | 200 |

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\$7,200, \$1,800

(certification fees) 가

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, \$45

(label fees)

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가 (reassessment fee) 가

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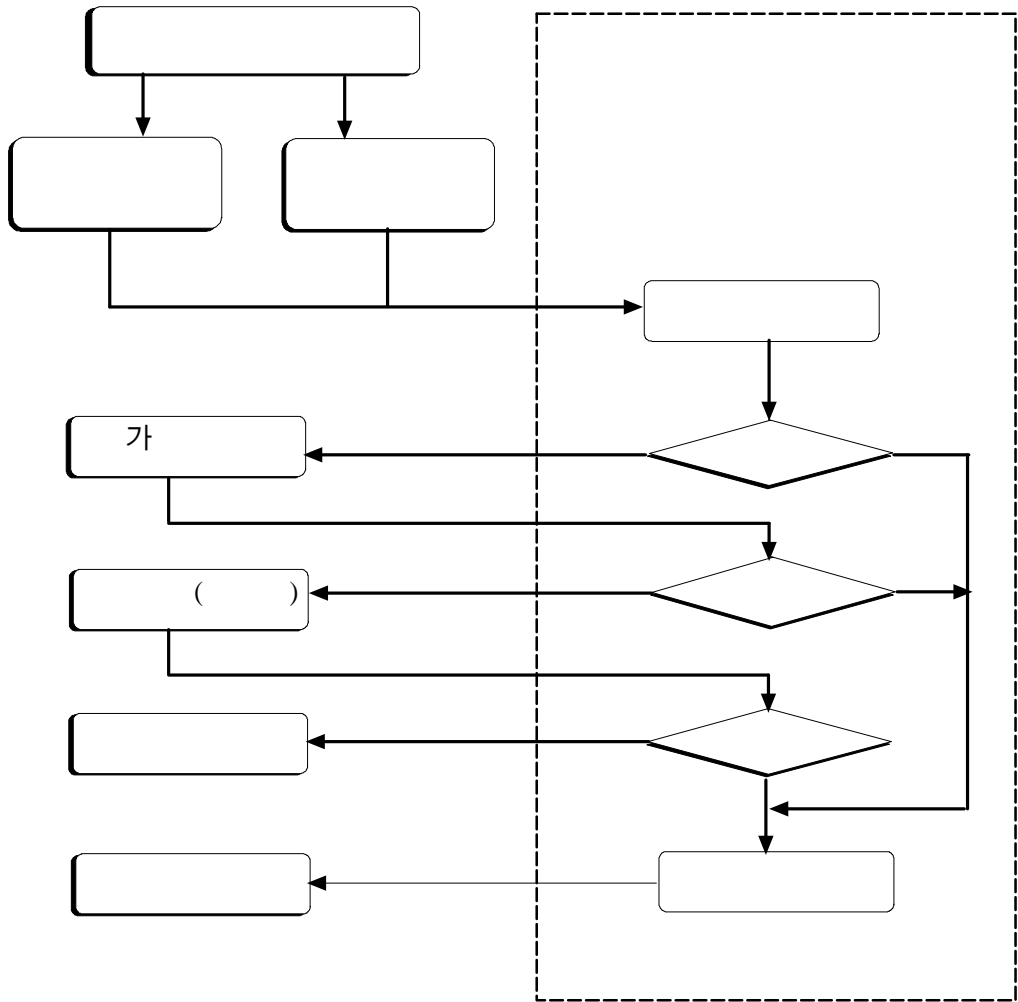
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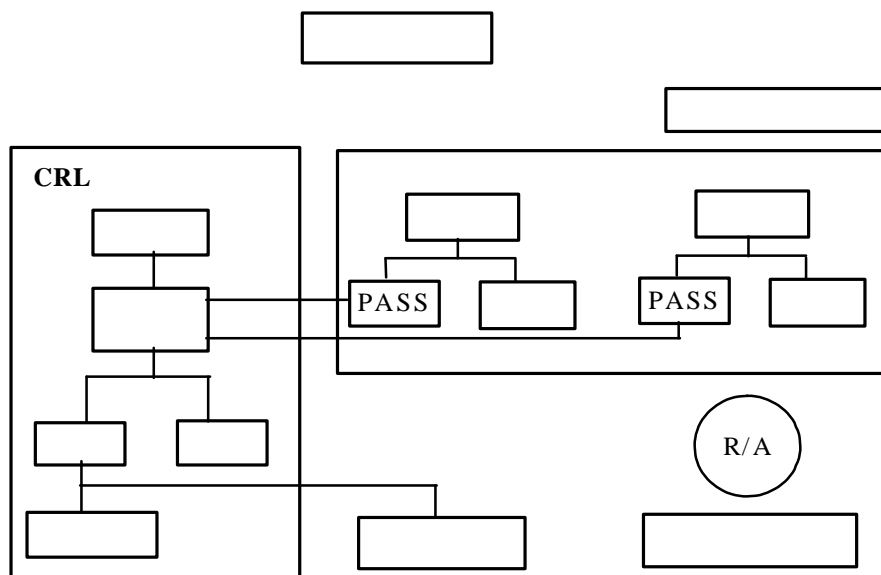


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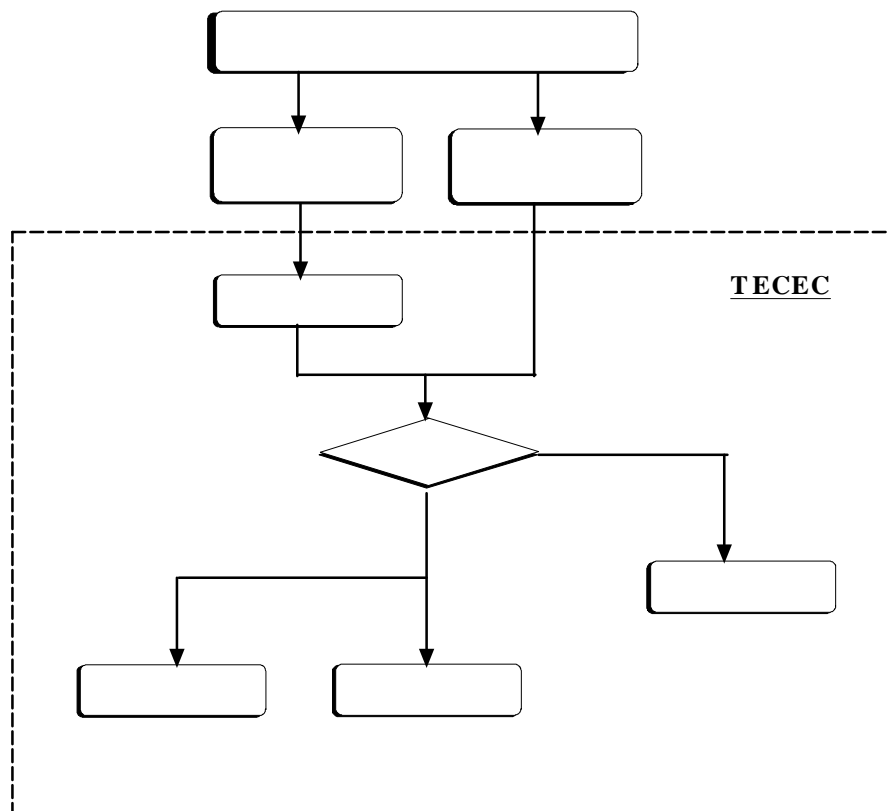
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Council for Interference by Information Technology Equipment:

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| - | 351,700 | 326,600 | 211,500 | 299,300 | 274,200 | 59,300 | 56,800 |
| - | 722,600 | 697,500 | 271,600 | 571,300 | 546,200 | 86,300 | 83,800 |
| - , , | 331,500 | 306,400 | 211,500 | 282,900 | 257,800 | 55,600 | 53,100 |
| o | 125,400 | 100,300 | 81,600 | 114,100 | 89,000 | 27,900 | 25,400 |
| o | 330,000 | 304,900 | 210,000 | 281,600 | 256,500 | 55,400 | 52,900 |
| o | 150,000 | 124,900 | 110,000 | 136,300 | 111,200 | 36,300 | 33,800 |
| o | 157,500 | 124,900 | 115,500 | | | 38,100 | 32,800 |
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| o | 346,500 | 293,800 | 220,500 | | | 58,200 | 52,900 |
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| o / | | | | | | | |
| o | 346,500 | 293,800 | 220,500 | | | 58,200 | 52,900 |
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| DSC (MF/HF) | 1,079,300 |
| “ | 871,900 |
| “ | 671,800 |
| DSC (VHF) | 893,400 |
| “ | 614,500 |
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| DSC A | 593,200 |
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| “ 4 | 1,077,700 | 53,800 | 646,000 |
| “ ALPA | 396,100 | 19,600 | 237,000 |
| | 459,500 | 22,800 | 275,000 |
| “ | 507,000 | 25,200 | 304,000 |
| | 538,800 | 26,900 | 323,000 |
| DSB | 688,000 | 34,200 | |
| | 443,700 | 22,000 | 266,000 |
| | 871,700 | 43,400 | |
| 800MHz | 776,600 | 38,700 | |
| “ | “ | “ | |
| “ 1500MHz | “ | “ | |
| MCA 800MHz | “ | “ | 465,000 |
| " 1500MHz " | “ | “ | “ |
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| | “ | “ | |
| | “ | “ | |
| 27,150 MHz | 507,000 | 25,200 | 304,000 |
| 400MHz | 633,900 | 31,600 | 380,000 |
| | 713,200 | 35,400 | 427,000 |
| | | | 427,000 |
| SSB | 855,800 | 42,600 | 513,000 |
| “ | 681,400 | 34,000 | 408,000 |
| “ | 570,400 | 27,500 | 342,000 |
| FM | 649,800 | 32,400 | 389,000 |
| “ | 554,700 | 27,500 | 332,000 |
| “ | 507,000 | 25,200 | 304,000 |

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| o | 5,500 | 810,000 |
| o | 5,500 | 810,000 |
| o FDMA . | 2,900 | 510,000 |
| o MCA | 2,900 | 710,000 |
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| o convenience | ” | 810,000 |
| o | “ | 810,000 |
| o MCA | 4,300 | 710,000 |
| o SSB | 3,400 | 810,000 |
| o | 5,500 | 810,000 |
| o F3E | 3,400 | 810,000 |
| o | 2,900 | 710,000 |
| o | 3,500 | 770,000 |
| o | 1,000 | 710,000 |
| o personal | 3,800 | 810,000 |
| o | 2,000 | 710,000 |
| o 50GHz CR | 10,000 | 710,000 |
| o | 2,700 | 810,000 |
| o | 1,200 | 210,000 |
| o | 3,900 | 710,000 |
| o VSAT | 12,000 | 810,000 |
| o 800MHz TDMA | 2,900 | 510,000 |
| o “ FDMA | 15,100 | 810,000 |
| o “ TDMA | “ | 810,000 |
| o 1.5GHz TDMA | 2,900 | 510,000 |
| o “ TDMA | 15,100 | 810,000 |
| o CDMA | 2,900 | 510,000 |
| o CDMA | 15,100 | 810,000 |
| o | 1,200 | 510,000 |

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| o () | 5,800 | 770,000 |
| o " " () | 5,800 | 770,000 |
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| o " | 10,000 | 810,000 |
| o 가 | 10,000 | 810,000 |
| o | 5,500 | 810,000 |
| o | 5,500 | 810,000 |
| o 22GHz | 10,000 | 810,000 |
| o | 1,900 | 810,000 |
| o MCA | 2,900 | 710,000 |
| o | 1,200 | 310,000 |
| o PHS | 1,200 | 310,000 |
| o PHS | 3,800 | 810,000 |
| o PHS | “ | 810,000 |
| o PHS | ” | 810,000 |
| o 38GHz | 10,000 | 810,000 |
| o RZSSB | 4,300 | 810,000 |
| o RZSSB | “ | 810,000 |
| o RZSSB | ” | 810,000 |
| o | “ | 810,000 |
| o | ” | 810,000 |
| o | “ | 810,000 |
| o | 3,500 | 770,000 |
| o BEACON | 3,500 | 770,000 |
| o TKd () | 5,800 | 770,000 |
| o " () | 5,800 | 770,000 |
| o | 5,500 | 810,000 |
| o INMARSAT | 8,600 | 810,000 |
| o 가 | 6,700 | 810,000 |
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| o () | 3,800 | 810,000 |
| o 1.9GHz | “ | 810,000 |
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| o wireless | “ | 810,000 |

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100 - 500 80%

500- 1200 “ 60% ”

1200- 10,000 “ 40% ”

4.

1997

(AUSTEL: Australian Telecommunications Authority) (SMA : Spectrum Management Agency) (ACA : Australian Communications Authority)

(ACA) (ACCC : Australian Competition and Consumer Commission)가 (ACA)

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ACA [Telecommunications Labelling(Customer Equipment and Customer Cabling) Notice No. 2 of 1997]

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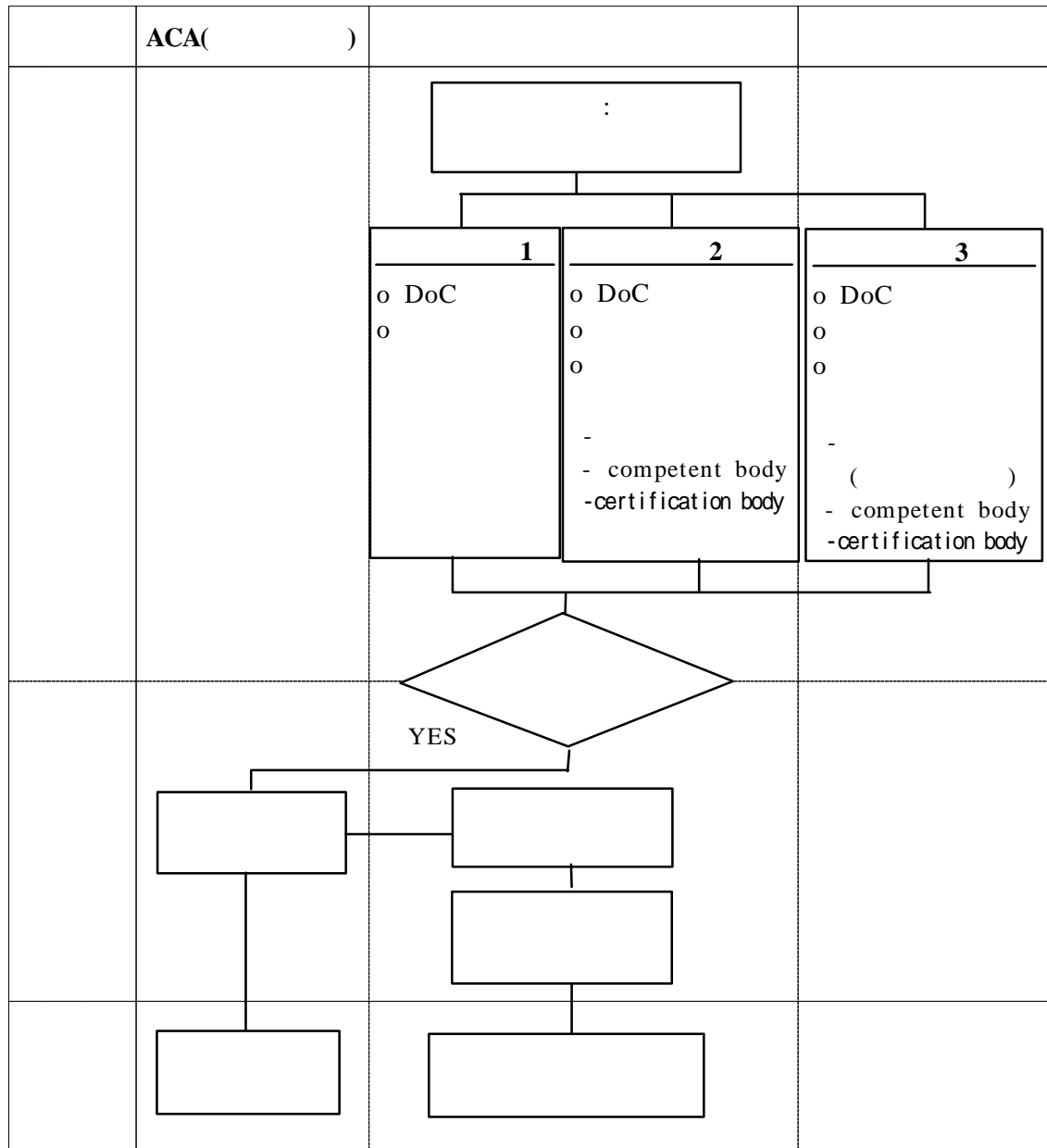
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o (3가 1가)

o ACA

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A- tick ACA [Telecommu-

ications Labelling(Customer Equipment and Customer Cabling) Notice No.

2 of 1997]

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| | | () |
| PSTN | ACA TS 001 ACA TS 002 ACA TS 004 | 3 |

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ACA TS 001, 002, 004 , 2- 10 3 .

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| o (9.7MHz- 1GHz) | AS 4295(1995) | 2 |
|--------------------------|-------------------|---|
| o 121.5, 243.0MHz | AS/NZS 4330(1995) | 3 |
| o 406 MHz | AS/NZS 4280(1995) | 3 |
| o (30MHz) | AS/NZS 4355(1995) | 2 |
| o UHF | AS/NZS 4365(1996) | 2 |
| o - | AS 4367(1996) | 2 |
| o (1W , 25MHz- 25 GHz) | AS 4268.2(1995) | 1 |
| o (1.7MHz 30- 41MHz) | AS/NZS 4281(1995) | 1 |
| o VHF , () | AS/NZS 4415(1996) | 3 |

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| | | FCC | IC | ACA | |
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| | | FCC, TCBs | IC | ACA | JATE, CRL, TELEC |
| | o o - - - - | o CFR47 - PART 2 - FORM 730, 731 | o o - CP 01 - RSP 100 | o o - ACA | o o - - - |
| | - - - - | Certification Doc Verification | Certification DoC | DoC ACA | - - - - |
| | . | . | . | . | . |
| | - - - - | FCC Part 15, 18, 68 | CS- 02, 03, 04, 05 RSS 117 210 | - ACA- TS - ACA- RS | - - - |
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FCC,
(CRL), ACA
TCB, JATE, TELEC .

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| () | () | FCC(), TCBs() | IC() | ACA() | JATE() CRL() TELEC() |

FCC
9) FCC (TC
B)¹⁰⁾ ,
TCB FCC
TCB
가 MRA
MRA 가
가 11)
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9) GEN Docket No. 98-68

10) (NIST) TCB

11) MRA APLAC MRA .

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Type Approval¹³⁾ 1997.5 Certification

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| | | | | | |
| | o : o : o : , o : EMI, EMS | Certification Doc Verification | Certificati on DoC | DoC | o : o : o : o : o : o : |
| | o o 가 | o Type Approval (FCC /) | o | o | o o 가 |

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12) DoC FCC (NIST)
(A2LA)
13) FCC () FCC
Certification (62FR10471, Mar.7,1997 ET Docket No.97- 94)

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2000.1.1 (EMS)

EMI EMS

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| | o . o o EMI, EMS | o . o o EMI | o . o o EMI | o . o o EMI, EMS | o . |
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| - | 125,000 (1,282,400) | “ | | (7,226,000) |
| - | 125,000 (1,117,400) | “ | | (3,315,000) |
| - ISDN | 125,000 (863,000) | “ | | (3,300,000) |
| - | 125,000 (1,117,400) | “ | | (3,315,000) |
| o | | | | |
| - 가 | 66,800 (334,000) | 1,182,000 | 756,000 | (5,100,000) |
| - | 144,400 (722,000) | 492,000 | | (13,006,000) |
| - | 49,600 (248,000) | | | (5,973,000) |
| - | 80,000 (400,000) | | 676,000 | (13,006,000) |
| - | 95,200 (476,000) | 1,182,000 | 836,000 | (7,132,000) |
| - | 146,800 (734,000) | 492,000 | | (6,647,000) |

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EMI

FCC

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(assessment fees)

(certification fees :\$45)

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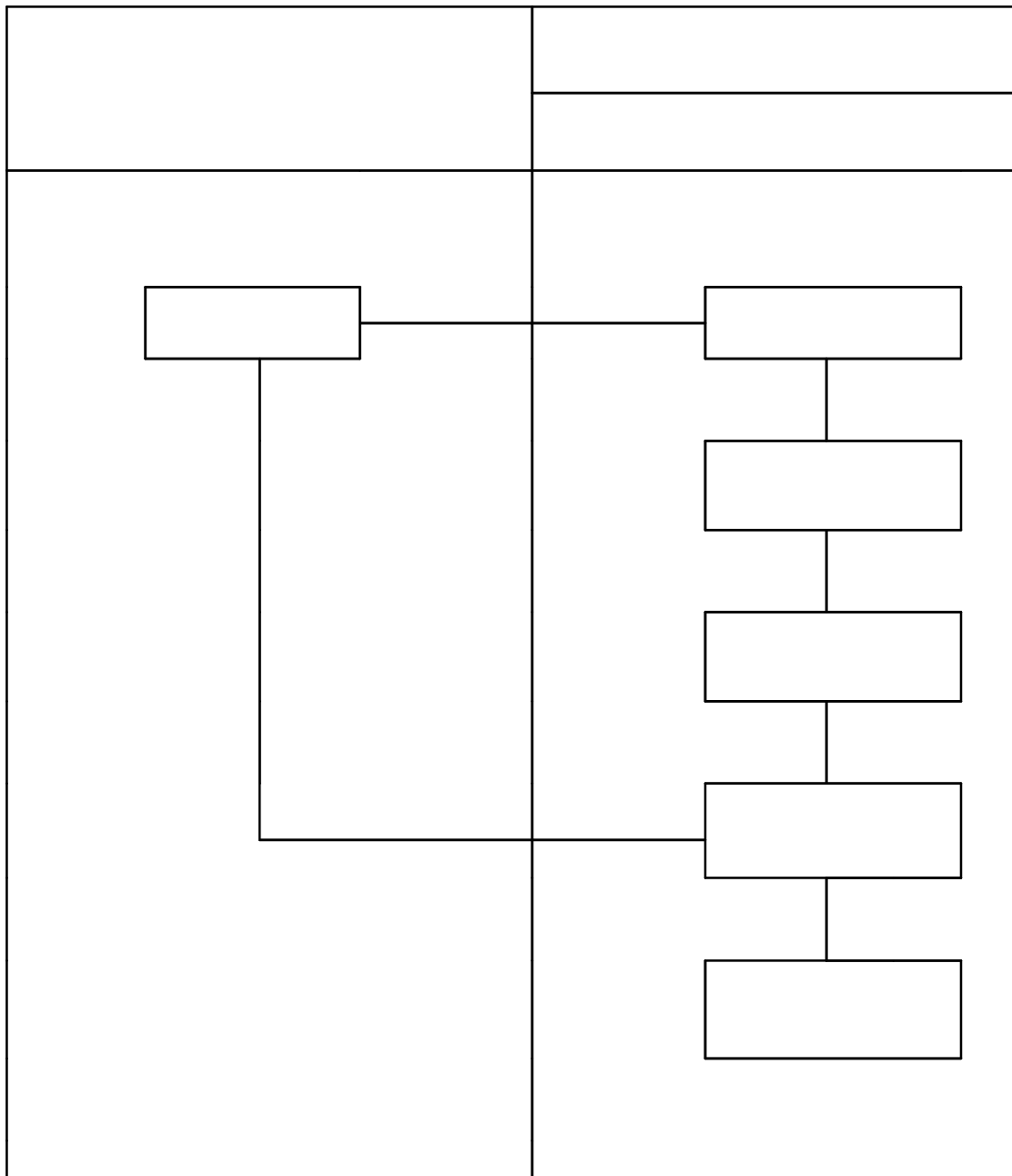
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Certificate of Information and Communication Equipment

(Certification Type) :

(Certification No) :

(Equipment Name) :

(Type of Equipment) :

(Applicant or Trade Name) :

(Manufacturer and Nation) 가 :

(Others) :

.

It is certified that foregoing equipment has been certificated under the provisions of the Regulations on certification of information and communication equipment

(Year) (Month) (Date)

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**Director General of Radio Research Laboratory
Ministry of Information and Communication
Republic of Korea**

[3]

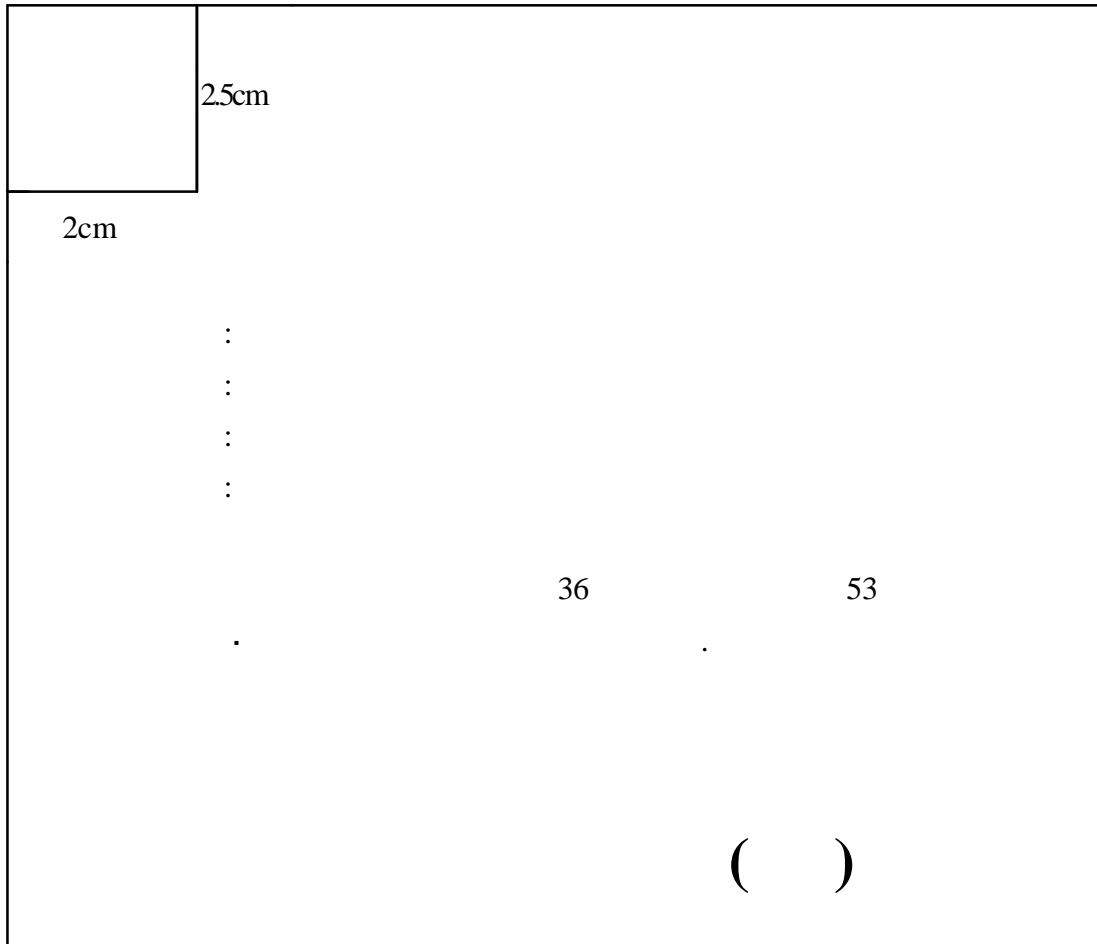
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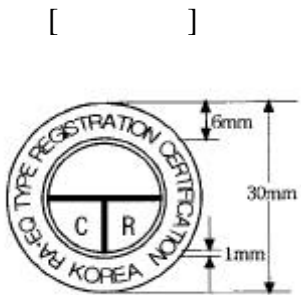
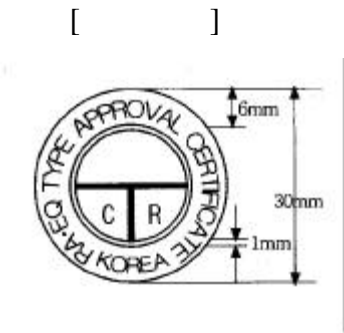
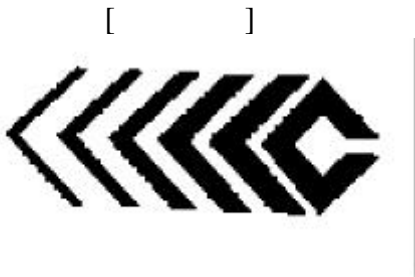
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$$\begin{aligned} &= \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \times \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) + \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \right. \\ &\quad \left. \times 120\% \right) + \left[\left(\begin{array}{c} \text{ } \\ \text{ } \end{array} + \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) \times 30\% \right] \\ &= \left(47 \times 11,496 \right) + \left(540,312 \times 120\% \right) + \\ &\quad \left[\left(540,312 + 648,374 \right) \times 30\% \right] = 540,312 + 48,374 + 356,606 \\ &\quad 1,545,000 \end{aligned}$$

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$$\begin{aligned} &= \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \times \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) + \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \right. \\ &\quad \left. \times 120\% \right) + \left[\left(\begin{array}{c} \text{ } \\ \text{ } \end{array} + \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) \times 30\% \right] \\ &= \left(12 \times 11,496 \right) + \left(137,952 \times 120\% \right) + \\ &\quad \left[\left(97,716 + 165,542 \right) \times 30\% \right] = 137,952 + 165,542 + 78,977 \\ &\quad 382,000 \end{aligned}$$

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$$\begin{aligned} &= \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \times \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) + \left(\begin{array}{c} \text{ } \\ \text{ } \end{array} \right. \\ &\quad \left. \times 120\% \right) + \left[\left(\begin{array}{c} \text{ } \\ \text{ } \end{array} + \begin{array}{c} \text{ } \\ \text{ } \end{array} \right) \times 30\% \right] \end{aligned}$$

$$= (19 \times 11,496) + (218,424 \times 120\%) + [(218,424 + 262,108) \times 30\%] = 218,424 + 262,109 + 144,160 = 625,000$$

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$$= (32 \times 11,496) + (367,872 \times 120\%) + [(367,872 + 441,446) \times 30\%] = (32 \times 11,496) + (367,872 \times 120\%) + [(367,872 + 441,446) \times 30\%] = 367,872 + 441,446 + 242,795 = 1,052,000$$

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$$= (81 \times 11,496) + (931,176 \times 120\%) + [(931,176 + 1,117,411) \times 30\%] = (81 \times 11,496) + (931,176 \times 120\%) + [(931,176 + 1,117,411) \times 30\%] = 931,176 + 1,117,411 + 614,576 = 2,663,000$$

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$$= (6 \times 11,496) + [(2 \times 11,496) \times (71 \div 766)] + [(34 \times 11,496) \times (94 \div 766)] = 68,976 + 2,069 + 46,904 = 118,000$$

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$$\begin{aligned}
 &= \frac{1}{2} \left(\frac{1}{2} \times \frac{1}{2} \right) + \left[\left(\frac{1}{2} \times \frac{1}{2} \right) \times \left(\frac{1}{2} \div \frac{1}{2} \right) \right] + \\
 &\quad \left[\left(\frac{1}{2} \times \frac{1}{2} \right) \times \left(\frac{1}{2} \div \frac{1}{2} \right) \right] \\
 &= \frac{1}{2} \left(\frac{1}{2} \times 11,496 \right) + \left[\left(\frac{1}{2} \times 11,496 \right) \times (507 \div 9,788) \right] + \\
 &\quad \left[\left(\frac{1}{2} \times 11,496 \right) \times (60 \div 9,788) \right] \\
 &= 68,976 + 1,150 + 1,242 + 71,000
 \end{aligned}$$

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$$\begin{aligned}
 &= \frac{1}{2} \left(\frac{1}{2} \times \frac{1}{2} \right) + \left[\left(\frac{1}{2} \times \frac{1}{2} \right) \times \left(\frac{1}{2} \div \frac{1}{2} \right) \right] + \\
 &\quad \left[\left(\frac{1}{2} \times \frac{1}{2} \right) \times \left(\frac{1}{2} \div \frac{1}{2} \right) \right] \\
 &= \frac{1}{2} \left(\frac{1}{2} \times 11,496 \right) + \left[\left(\frac{1}{2} \times 11,496 \right) \times (116 \div 2,116) \right] + \\
 &\quad \left[\left(\frac{1}{2} \times 11,496 \right) \times (121 \div 2,116) \right] = 68,976 + 1,150 + 67,596 + 138,000
 \end{aligned}$$

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7. , . , 1998 3 .
8. , , 1992 3 .
9. , 가 , 1999- 19 , 1999.3.11
10. () 가 , 가 , 1999 7
11. FCC, REPORT AND ORDER in GEN Docket No. 98-68, 1998 12 23
12. FCC, REPORT AND ORDER in ET Docket No. 97-94, 1997
13. Industry Canada, Certification Procedure 01 (CP-01), Issue 8, 1998 9
14. Industry Canada, Radio Standards Procedure 100 (RSP-100), Issue 7, 1997
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