

표준화 소식

CCIR 신속 승인 권고안의 소개

아래 권고안들은 1991년 11월 4일부터 8일까지 개최되었던 CCIR연구위원회인 SG4, SG4-9, SG9에서 신속 승인절차에 따라 채택된 권고안이다. 건수로는 SG4관련 36건, SG4-9 관련 5건, SG9관련 42건 으로서 1992년 3월 6~8일 기한으로 각주관청의 우편 투표 결과에 따라 정식권고로써 통보될 예정이다. (※ 이 책자발간 시점까지 승인여부 통보가 없었으며, 총83건중 80건을 협회자료실이 보유하고 있음)

1. 제4연구위원회(SG4 : 고정위성통신)

DOC. No.	제 목	내 용
DOC4/BL/01	DRAFT NEW RECOMMEN- DATION(DOC.4/41)	TECHNICAL CHARACTERISTICS FOR VERY SMALL APERTURE TERMINALS (VSATs)
DOC4/BL/02	DRAFT NEW RECOMMEN- DATION(DOC.4/42)	MAXIMUM PERMISSIBLE LEVEL OF SPURIOUS EMISSIONS FROM VERY SMALL APERTURE TERMINALS(VS- ATs)
DOC4/BL/03	DRAFT NEW RECOMMEN- DATION(DOC.4/43)	CROSS-POLARIZATION ISOLATION FR- OM VERY SMALL APERTURE TERMI- NALS(VSATs)
DOC4/BL/04	DRAFT NEW RECOMMEN- DATION(DOC.4/44)	MAXIMUM PERMISSIBLE LEVEL OF OFF-AXIS e.i.r.p DENSITY FROM VERY SMALL APERTURE TERMINALS(VSA- Ts)

DOC. No.	제 목	내 용
DOC4/BL/05	DRAFT NEW RECOMMEN- DATION(DOC.4/45)	CONTROL AND MONITORING FUNC- TION OF VERY SMALL APERTURE TERMINALS(VSATs)
DOC4/BL/06	DRAFT REVISION OF REC- COMMENDATION 353-6	ALLOWABLE NOISE POWER IN THE HYPOTHETICAL REFERENCE CIRCUIT FOR FREQUENCY-DIVISION MULTIPL- EX TELEHONY IN THE FIXED-SATEL- LITE SERVICE
DOC4/BL/07	DRAFT REVISION OF REC- COMMENDATION 522-3	ALLOWABLE BIT ERROR RATIOS AT THE OUTPUT OF THE HYPOTHETICAL REFERENCE DIGITAL PATH FOR SYSTEMS IN THE FIXED-SATELLITE SERVICE USING PULSE-CODE MODULA- TION FOR TELEPHONY
DOC4/BL/08	DRAFT REVISION OF REC- COMMENDATION 614-1	ALLOWABLE ERROR PERFORMANCE FOR A HYPOTHETICAL REFERENCE DIGITAL PATH IN THE FIXED-SATEL- LITE SERVICE OPERATING BELOW 15 GHz WHEN FORMING PART OF AN INTER NATIONAL CONNECTION IN AN INTEGRATED SERVICES DIGITAL NET- WORK

DOC. No.	제 목	내 용
DOC4/BL/09	DRAFT REVISION OF RECOMMENDATION 579-1	AVAILABILITY OBJECTIVES FOR A HYPOTHETICAL REFERENCE CIRCUIT AND A HYPOTHETICAL REFERENCE DIGITAL PATH WHEN USED FOR TELEPHONY USING PULSE-CODE MODULATION, OR AS PART OF AN INTEGRATED SERVICES DIGITAL NETWORK HYPOTHETICAL REFERENCE CONNECTION, IN THE FIXED-SATELLITE SERVICE
DOC4/BL/10	PROPOSED REVISION OF DRAFT NEW RECOMMENDATION(DOC.4/81)	COMPENSATION OF THE EFFECTS OF SWITCHING DISCONTINUITIES FOR VOICE BAND DATA AND OF DOPPLER FREQUENCY-SHIFTS IN THE FIXED-SATELLITE SERVICE
DOC4/BL/11	DRAFT REVISION TO RECOMMENDATION 465-3	REFERENCE EARTH-STATION RADIATION PATTERN FOR USE IN COORDINATION AND INTERFERENCE ASSESSMENT IN THE FREQUENCY RANGE FROM 2 TO ABOUT 30 GHz

DOC. No.	제 목	내 용
DOC4/BL/12	DRAFT NEW RECOMMEN- DATION(DOC.4/39)	REFERENCE EARTH-STATION CROSS- POLARIZED RADIATION PATTERN FO- R USE IN FREQUENCY COORDINATION AND INTERFERENCE ASSESSMENT IN THE FREQUENCY RANGE FROM 2 TO ABOUT 30GHz
DOC4/BL/13	DRAFT REVISION OF REC- COMMENDATION 580-3	RADIATION DIAGRAMS FOR USE AS DESIGN OBJECTIVES FOR ANTENNAS OF EARTH STATIONS OPERATING WI- TH GEOSTATIONARY SATELLITES
DOC4/BL/14	DRAFT NEW RECOMMEN- DATION(DOC.4/29)	METHOD FOR STATISTICAL PROCESS- ING OF EARTH STATION ANTENNA SIDE-LOBE PEAKS
DOC4/BL/15	DRAFT NEW RECOMMEN- DATION(DOC.4/67)	MEASUREMENT OF THE G/T RATIO FOR EARTH STATIONS OPERATING IN THE FIXED-SATELLITE SERVICE
DOC4/BL/16	DRAFT NEW RECOMMEN- DATION(DOC.4/69)	THE APPLICATION OF INTERFERENCE CANCELLERS IN THE FIXED-SATEL- LITE SERVICE

DOC. No.	제 목	내 용
DOC4/BL/17	DRAFT REVISION OF RECOMMENDATION 464-1	PRE-EMPHASIS CHARACTERISTICS FOR FREQUENCY-MODULATION SYSTEMS FOR FREQUENCY-DIVISION MULTIPLEX TELEPHONY IN THE FIXED-SATELLITE SERVICE
DOC4/BL/18	DRAFT REVISION OF RECOMMENDATION 446-2	CARRIER ENERGY DISPERSAL FOR SYSTEMS EMPLOYING ANGLE MODULATION BY ANALOGUE SIGNALS OR DIGITAL MODULATION IN THE FIXED-SATELLITE SERVICE
DOC4/BL/19	DRAFT REVISION OF RECOMMENDATION 466-5	MAXIMUM PERMISSIBLE LEVEL OF INTERFERENCE IN A TELEPHONE CHANNEL OF A GEOSTATIONARY-SATELLITE NETWORK IN THE FIXED-SATELLITE SERVICE EMPLOYING FREQUENCY MODULATION WITH FREQUENCY-DIVISION MULTIPLEX, CAUSED BY OTHER NETWORKS OF THIS SERVICE

DOC. No.	제 목	내 용
DOC4/BL/20	DRAFT REVISION OF RECOMMENDATION 483-1	MAXIMUM PERMISSIBLE LEVEL OF INTERFERENCE IN A TELEVISION CHANNEL OF A GEOSTATIONARY SATELLITE NETWORK IN THE FIXED-SATELLITE SERVICE EMPLOYING FREQUENCY MODULATION, CAUSED BY OTHER NETWORKS OF THIS SERVICE
DOC4/BL/21	DRAFT REVISION OF RECOMMENDATION 523-3	MAXIMUM PERMISSIBLE LEVELS OF INTERFERENCE IN A GEOSTATIONARY-SATELLITE NETWORK IN THE FIXED-SATELLITE SERVICE USING 8 BIT PCM ENCODED TELEPHONY, CAUSED BY OTHER NETWORKS OF THIS SERVICE
DOC4/BL/22	DRAFT NEW RECOMMENDATION(DOC.4/22)	MAXIMUM PERMISSIBLE LEVELS OF INTERFERENCE IN A GEOSTATIONARY-SATELLITE NETWORK FOR AN H-RDP WHEN FORMING PART OF THE ISDN IN THE FIXED-SATELLITE SERVICE CAUSED BY OTHER NETWORKS OF THIS SERVICE BELOW 15 GHz

DOC. No.	제 목	내 용
DOC4/BL/23	DRAFT REVISION TO RECOMMENDATION 671	NECESSARY PROTECTION RATIOS FOR NARROW-BAND SINGLE CHANNEL-PER-CARRIER TRANSMISSIONS INTERFERED WITH BY ANALOGUE TELEVISION CARRIERS
DOC4/BL/24	DRAFT REVISION TO RECOMMENDATION 524-3	MAXIMUM PERMISSIBLE LEVELS OF OFF-AXIS e.i.r.p.DEN SITH FROM EARTH STATIONS IN THE FIXED-SATELLITE SERVICE TRANSMITTING IN THE 6 AND 14 GHz FREQUENCY BANDS
DOC4/BL/25	DRAFT NE RECOMMENDATION(DOC.4/38)	ESTIMATION OF POLARIZATION DISCRIMINATION IN THE INTERFERENCE CALCULATIONS BETWEEN GEOSTATIONARY-SATELLITE NETWORKS IN THE FIXED SATELLITE SERVICE
DOC4/BL/26	DRAFT NEW RECOMMENDATION(DOC.4/98)	RELATIONSHIP OF TECHNICAL COORDINATION METHODS WITH IN THE FIXED SATELLITE SERVICE

DOC. No.	제 목	내 용
DOC4/BL/27	DRAFT NEW RECOMMEN- DATION(DOC.4/11)	PROCEDURE FOR DETERMINING IF CO- ORDINATION IS REQUIRED BETWEEN GEOSTATIONARY-SATELLITE NETWO- RKS SHARING THE SAME FREQUENCY BANDS
DOC4/BL/28	DRAFT NEW RECOMMEN- DATION(DOC.4/12)	ADDITIONAL METHODS FOR DETER- MINING IF DETAILED COORDINATION IS NECESSARY BETWEEN GEOSTA- TIONARY-SATELLITE NETWORKS IN THE FIXED-SATELLITE SERVICE SHAR- ING THE SAME FREQUENCY BANDS
DOC4/BL/29	DRAFT NEW RECOMMEN- DATION(DOC.4/13)	TECHNICAL COORDINATION METHODS FOR FIXED-SATELLITE NETWORKS
DOC4/BL/30	DRAFT NEW RECOMMEN- DATION(DOC.4/14)	CARRIER-TO-INTERFERENCE CALCUL- ATIONS BETWEEN NETWORKS IN THE FIXED-SATELLITE SERVICE
DOC4/BL/31	DRAFT NEW RECOMMEN- DATION(DOC.4/15)	SPECTRUM UTILIZATION METHODOL- OGIES

DOC. No.	제 목	내 용
DOC4/BL/32	DRAFT NEW RECOMMEN- DATION(DOC.4/6)	THE COORDINATION OF SATELLITE NETWORKS USING SLIGHTLY INCLINED GEOSTATIONARY-SATELLITE ORBITS AND BETWEEN SUCH NETWORKS AND SATELLITE NETWORKS USING NONINCLINED GSO SATELLITES
DOC4/BL/33	DRAFT NEW RECOMMEN- DATION(DOC.4/3)	ORBIT/SPECTRUM IMPROVEMENT MEASURES FOR SATELLITE NETWORKS HAVING MORE THAN ONE SERVICE IN ONE OR MORE FREQUENCY BANDS
DOC4/BL/34	DRAFT REVISION OF REC- COMMENDATION 484-2	STATION-KEEPING IN LONGITUDE OF GEOSTATIONARY SATELLITES IN THE FIXED-SATELLITE SERVICE
DOC4/BL/35	DRAFT REVISION OF REC- COMMENDATION 670	FLEXIBILITY IN THE POSITIONING OF SATELLITES AS A DESIGN OBJECTIVE
DOC4/BL/36	DRAFT REVISION TO REC- COMMENDATION 672	SATELLITE ANTENNA RADIATION PATTERN FOR USE AS A DESIGN OBJECTIVE IN THE FIXED-SATELLITE SERVICE EMPLOYING GEOSTATIONARY SATELLITES

2. 제4, 제9 합동 연구위원회(SG4-9)

DOC. No.	제 목	내 용
DOC4-9/BL/01	DRAFT REVISION OF RECOMMENDATION 355-3	FREQUENCY SHARING BETWEEN SYSTEMS IN THE FIXED-SATELLITE SERVICE AND RADIO-RELAY SYSTEMS IN THE SAME FREQUENCY BANDS
DOC4-9/BL/02	DRAFT REVISION OF RECOMMENDATION 406-6	MAXIMUM EQUIVALENT ISOTROPICALLY RADIATED POWER OF LINE-OF-SIGHT RADIO-RELAY SYSTEM TRANSMITTERS OPERATING IN THE FREQUENCY BANDS SHARED WITH THE FIXED-SATELLITE SERVICE
DOC4-9/BL/03	DRAFT NEW RECOMMENDATION(DOC.4/53-9/84)	INTERSECTION OF RADIO-RELAY ANTENNA BEAMS WITH ORBITS USED BY SPACE STATIONS IN THE FIXED-SATELLITE SERVICE
DOC4-9/BL/04	DRAFT NEW RECOMMENDATION(DOCS.4/54-9/85)	METHODS FOR DETERMINING THE EFFECTS OF INTERFERENCE ON THE PERFORMANCE AND THE AVAILABILITY OF TERRESTRIAL RADIO-RELAY SYSTEMS AND SYSTEMS IN THE FIXED-SATELLITE SERVICE
DOC4-9/BL/05	DRAFT REVISION OF RECOMMENDATION 675	CALCULATION OF THE MAXIMUM POWER DENSITY(AVERAGED OVER 4 kHz) OF AN ANGLE-MODULATED CARRIER

3. 제9 연구위원회(SG9 : 무선중계)

DOC. No.	제 목	내 용
DOC9/BL/01	DRAFT NEW RECOMMEN- DATION(DOC.9/5)	CCIR RECOMMENDATIONS FOR ANA- LOGUE RADIO-RELAY SYSTEMS
DOC9/BL/02	DRAFT REVISION OF REC- COMMENDATION 594-2	ALLOWABLE BIT-ERROR RATIOS AT THE OUTPUT OF THE HYPOTHETICAL REFERENCE DIGITAL PATH FOR RAD- IO-RELAY SYSTEMS WHICH MAY FO- RM PART OF AN INTEGRATED SER- VICES DIGITAL NETWORK
DOC9/BL/03	DRAFT REVISION OF REC- COMMENDATION 634-1	ERROR PERFORMANCE OBJECTIVES F- OR REAL DIGITAL RADIO-RELAY LI- NKS FORMING PART OF A HIGH-GR- ADE CIRCUIT WITHIN AN INTEGRAT- ED SERVICES DIGITAL NETWORK
DOC9/BL/04	DRAFT REVISION OF REC- COMMENDATION 557-2	AVAILABILITY OBJECTIVE FOR RA- DIO-RELAY SYSTEMS OVER A HYPO- THETICAL REFERENCE CIRCUIT AND A HYPOTHETICAL REFERENCE DIGI- TAL PATH

DOC. No.	제 목	내 용
DOC9/BL/05	DRAFT REVISED REDOMMENDATION 696	ERROR PERFORMANCE AND AVAILABILITY OBJECTIVES FOR HYPOTHETICAL REFERENCE DIGITAL SECTIONS UTILIZING DIGITAL RADIO-GRADE PORTION OF AN ISDN CONNECTION
DOC9/BL/06	DRAFT REISED RECOMMENDATION 697	ERROR PERFORMANCE AND AVAILABILITY OBJECTIVES FOR THE LOCAL-GRADE PORTION AT EACH END OF AN ISDN CONNECTION UTILIZING DIGITAL RADIO-RELAY SYSTEMS
DOC9/BL/07	DRAFT NEW RECOMMENDATION(DOC.9/19)	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS
DOC9/BL/08	DRAFT REVISION OF RECOMMENDATION 382-5	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 2 AND 4 GHz BANDS
DOC9/BL/12	DRAFT REVISION OF RECOMMENDATION 386-3	RADIO FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 8 GHz BAND

DOC. No.	제 목	내 용
DOC9/BL/13	DRAFT NEW RECOMMENDATION(DOC.9/25)	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 10 GHz BAND
DOC9/BL/14	DRAFT REVISION OF RECOMMENDATION 387-5	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 11 GHz BAND
DOC9/BL/15	DRAFT REVISION OF RECOMMENDATION 497-3	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATION IN THE 13 GHz FREQUENCY BAND
DOC9/BL/16	DRAFT REVISION OF RECOMMENDATION 636-1	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATION IN THE 15 GHz BAND
DOC9/BL/17	DRAFT REVISION OF RECOMMENDATION 595-2	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATION IN THE 18 GHz FREQUENCY BAND

DOC. No.	제 목	내 용
DOC9/BL/18	DRAFT REVISION OF RECOMMENDATION 637	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 23 GHz BAND
DOC9/BL/19	DRAFT NEW RECOMMENDATION(DOC.9/31)	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS OPERATING IN THE 25.25 TO 27.5 GHz AND 27.5 TO 29.5 GHz BANDS
DOC9/BL/20	DRAFT NEW RECOMMENDATION(DOC.9/32)	RADIO-FREQUENCY CHANNEL ARRANGEMENTS FOR RADIO-RELAY SYSTEMS IN THE 36.0 TO 40.5 GHz BAND
DOC9/BL/21	DRAFT NEW RECOMMENDATION(DOC.9/76)	ARCHITECTURES AND FUNCTIONAL ASPECTS OF RADIO-RELAY SYSTEMS FOR SDH-BASED NETWORKS
DOC9/BL/22	DRAFT NEW RECOMMENDATION(DOC.9/77)	TRANSMISSION CHARACTERISTICS AND PERFORMANCE REQUIREMENTS OF RADIO-RELAY SYSTEMS FOR SDH-BASED NETWORKS

DOC. No.	제 목	내 용
DOC9/BL/23	DRAFT REVISION OF RECOMMENDATION 699	REFERENCE RADIATION PATTERNS FOR LINE-OF-SIGHT RADIO-RELAY SYSTEM ANTENNAS FOR USE IN COORDINATION STUDIES AND INTERFERENCE ASSESSMENT IN THE FREQUENCY RANGE FROM 1 TO ABOUT 40 GHz
DOC9/BL/24	DRAFT NEW RECOMMENDATION(DOC.9/34)	DIVERSITY TECHNIQUES FOR RADIO-RELAY SYSTEMS
DOC9/BL/25	DRAFT NEW RECOMMENDATION(DOC.9/35)	PREFERRED METHODS AND CHARACTERISTICS FOR THE SUPERVISION AND PROTECTION OF DIGITAL RADIO-RELAY SYSTEMS
DOC9/BL/26	DRAFT REVISION OF RECOMMENDATION 700	ERROR PERFORMANCE AND AVAILABILITY MEASUREMENT ALGORITHM FOR DIGITAL RADIO-RELAY LINKS AT THE BIT-RATE INTERFACE
DOC9/BL/27	DRAFT NEW RECOMMENDATION(DOC.9/44)	RADIO-RELAY SYSTEMS IN BANDS 8 AND 9 FOR THE PROVISION OF TELEPHONE TRUNK CONNECTIONS IN RURAL AREAS
DOC9/BL/28	DRAFT NEW RECOMMENDATION(DOC.9/45)	POINT-TO-MULTIPOINTING SYSTEMS

DOC. No.	제 목	내 용
DOC9/BL/29	DRAFT NEW RECOMMEN- DATION(DOC.9/46)	TDMA POINT-TO-MULTIPOINT SYSTEMS USED AS RADIO CONCENTRATORS
DOC9/BL/30	DRAFT NEW RECOMMEN- DATION(DOC.9/47)	BASIC SYSTEM REQUIREMENTS AND PERFORMANCE OBJECTIVES FOR CELLULAR TYPE MOBILE SYSTEMS USED AS FIXED SYSTEMS
DOC9/BL/31	DRAFT REVISION OF RECOMMENDATION 698	PREFERRED FREQUENCY BANDS FOR TRANS-HORIZON RADIO-RELAY SYSTEMS
DOC9/BL/32	DRAFT NEW RECOMMEN- DATION(DOC.9/56)	CONSIDERATIONS IN THE DEVELOPMENT OF CRITERIA FOR SHARING BETWEEN THE TERRESTRIAL FIXED SERVICE AND OTHER SERVICES
DOC9/BL/33	DRAFT NEW RECOMMEN- DATION(DOC.9/57)	THE USE OF FREQUENCIES IN THE BAND 500 TO 3000 MHz FOR RADIO-RELAY SYSTEMS
DOC9/BL/34	DRAFT NEW RECOMMEN- DATION(DOC.9/58)	PROTECTION OF TERRESTRIAL LINE-OF-SIGHT RADIO-RELAY SYSTEMS AGAINST INTERFERENCE FROM THE BROADCASTING-SATELLITE SERVICE IN THE BAND 22.5 - 23 GHz

DOC. No.	제 목	내 용
DOC9/BL/35	DRAFT NEW RECOMMEN- DATION(DOC.9/59)	FREQUENCY SHARING BETWEEN THE FIXED SERVICE AND PASSIVE SEN- SORS IN THE BAND 18.6-18.8 GHz
DOC9/BL/36	DRAFT REVISION OF REC- COMMENDATION 240-5	SIGNAL-TO-INTERFERENCE PROTECTI- ON RATIOS FOR VARIOUS CLASSES OF EMISSION IN THE FIXED SERVICE BE- LOW ABOUT 30 MHz
DOC9/BL/37	DRAFT REVISION OF REC- COMMENDATION 162-2	USE OF DIRECTIONAL TRANSMITTING ANTENNAS IN THE FIXED SERVICE OPERATING IN THE BANDS 4 TO 28 MHz
DOC9/BL/38	DRAFT REVISION OF REC- COMMENDATION 520-1	USE OF HIGH FREQUENCY IONOSPHER- IC CHANNEL SIMULATORS
DOC9/BL/39	DRAFT NEW RECOMMEN- DATION(DOC.9/67)	MAIN CHARACTERISTICS OF REMOTE CONTROL AND MONITORING SYSTEMS FOR HF RECEIVING AND TRANSMIT- TING STATIONS
DOC9/BL/40	DRAFT REVISION OF REC- COMMENDATION 455-1	IMPROVED TRANSMISSION SYSTEMS FOR HF RADIOTELEPHONE CIRCUITS

DOC. No.	제 목	내 용
DOC9/BL/41	DRAFT NEW RECOMMEN- DATION(DOC.9/70)	DATA TRANSMISSION AT 2400/1200/ 600/300/150/75 BIT/SOVER HF CIRC- UITS USING MULTI-CHANNEL VOICE- FREQUENCY TELEGRAPHY AND PHA- SE-SHIFT KEYING
DOC9/BL/42	DRAFT NEW RECOMMEN- DATION(DOC.9/71)	MINIMUM REQUIREMENTS FOR HF R- ADIO SYSTEMS USING A PACKET TR- ANSMISSION PROTOCOL
DOC9/BL/43	DRAFT REVISION OF REC- OMMENDATION 383-4	RADIO-FREQUENCY CHANNEL ARR- ANGEMENTS FOR HIGH CAPACITY RA- DIO RELAY SYSTEMS OPERATING THE LOWER 6 GHz BAND
DOC9/BL/44	DRAFT REVISION OF REC- OMMENDATION 385-4	RADIO-FREQUENCY CHANNEL ARR- ANGEMENTS FOR RADIO RELAY SYS- TEMS OPERATING IN THE 7 GHz BA- ND
DOC9/BL/45	DRAFT REVISION OF REC- OMMENDATION 635-1	RADIO-FREQUENCY CHANNEL ARR- ANGEMENTS BASED ON THE HOMOGE- NEOUS PATTERN FOR RADIO-RELAY SYSTEMS OPERATING IN THE 4 GHz BAND