

property in the United States on 1 January 1978.

Under the new act, a single system of statutory protection for both published and unpublished copyrightable works replaces the previous system of statutory and common law. The duration of copyright for works published after 1 January 1978 has been extended to the duration of the author's life plus 50 years, while works created for hire will be protected for 75 years from publication or 100 years from creation, whichever is shorter.

The new law adds a provision which specifically recognizes the principle of "fair use" as a limitation on the exclusive rights of copyright owners and indicates the factors to be considered in determining whether particular uses fall within this category. The new law makes provisions for reproduction by libraries and archives, for the compulsory licensing of recording rights in music and for jukebox operation, and for compulsory licensing of certain types of cable television transmissions. Most significantly, it provides for the es-

tablishment of a copyright tribunal which will, among other matters, determine and review certain copyright royalty rates. In September of 1977, President Carter appointed as the first Commissioners of the Copyright Royalty Tribunal, Thomas C. Brennan, Douglas Coulter, Mary Lou Burg, Clarence L. James, Jr., and Frances Garcia.

Both producers and users of mass media products will wish to familiarize themselves with all of the provisions of the new act, the precise interpretation and impact of which will wait upon time, use, and the judgment of the Copyright Tribunal and the courts. In the meantime, intellectual and artistic property copyrighted prior to 1 January 1978 will continue to be protected under provisions of the old act until expiration of such copyrights.

White House Honors the American Film

For the first time in the history of the presidency, a formal White House reception was held to honor the motion-picture art and industry, hosted by President and

Mrs. Carter on 17 November 1977. In addition to the many notables present from the motion-picture industry were several educators and scholars representing organizations active in the field of film and television studies. These included Peter Dart of the University of Kansas (President, University Film Association); Raymond Fielding, Temple University (Trustee, American Film Institute and Vice-President for Educational Affairs, SMPTE); John Kuiper, Director of the Department of Film, George Eastman House Museum and member of the SMPTE Educational Advisory Committee; Timothy Lyons, Temple University (President, Society for Cinema Studies); David Mallery, Director of Studies of the National Association of Independent Schools; Edward Perry, Director of the Film Department, Museum of Modern Art; and Robert Wagner, Ohio State University (Trustee, American Film Institute and member of the SMPTE Educational Advisory Committee). — *Raymond Fielding*, Vice-President for Educational Affairs

EUROPEAN BROADCASTING UNION

Although relatively little progress has been achieved recently in the formerly active fields of transmission coverage and duration within the European Broadcasting Area (see Table I), except in countries such as Turkey where the network is still being constructed, and France, where an obsolescent monochrome network is being duplicated by a modern color one, various minor developments can be reported. One of these is the experimental use of stereophonic sound to accompany television broadcasts which has been introduced by several European broadcasting organizations during the past year. As neither transmitting nor receiving facilities for stereophony are available directly in association with television, it has been necessary to use simultaneous duplication on a stereophonic FM radio network. Both popular and classical music, including opera, have been broadcast successfully in this way, and the technique has also provided a dramatic demonstration of the deficiencies of the sound reproduction quality of many television receivers.

The response from the public has been sufficient to encourage broadcasting organizations to study the two principal technical problems involved: how best to record television programs accompanied by stereophonic sound, and how best to broadcast them. Two EBU Working Parties are engaged on these studies, which will also take into account the possible application of these techniques to the simultaneous transmission of two languages.

Another new technique which has attracted much attention during the past year is broadcast teletext, which is being transmitted experimentally in at least four countries. The lack of mass-produced receiving equipment has prevented a rapid expansion of the audience, but it has also enabled the broadcasters to continue with further development of the two systems now in use, one of which is used for the CEEFAX and ORACLE services in the United Kingdom and the other for AN-TIOPE in France. Compatibility of the broadcast teletext standards and those adopted for interactive domestic digital information services, such as Viewdata in the United Kingdom, is considered to be essential for the successful introduction and operation of both services, which are seen as being complementary from the user's point of view.

So far as color television broadcasting is concerned, the introduction of second program services by both the French- and Dutch-speaking networks in Belgium is worth mentioning. This took place on 26 April 1977 when the VHF transmitters began operating on the familiar B-PAL system instead of the obsolescent monochrome system C. This was the first time that a network had changed its transmission system overnight, and it was preceded by an extensive information campaign to ensure that viewers were ready. Alternative programs are provided only on weekday evenings at present, which explains the relatively small duration of the second program schedules. The introduction of

color, using the SECAM system, by the Libyan broadcasting organization L.J.B. (formerly P.R.B.C.) should also be noted.

As may be seen from Table II, the duration of color television broadcasting in Europe continues to increase, particularly in the case of the smaller countries. In the larger organizations, on the other hand, it has remained virtually unchanged, as the proportion of color in the schedules has already reached nearly 100%. Similarly, the audience equipped for color reception is growing more slowly in the countries where color transmissions began ten years ago than in those where they have been introduced recently, because it is already in the majority in several of the former cases.

There were few major sports events of international interest during the year, and the opportunity was therefore taken to make preparation for the next World Football Championship, which will be held in Argentina in 1978, and for the 1980 Olympic Games, which will be held in Moscow, USSR and Lake Placid, USA. In the field of news, on the other hand, undoubtedly the most memorable coverage was that of the peace negotiations in the Middle East, which involved numerous transmissions via satellite, using provisional ad hoc facilities from Cairo and Jerusalem, at the end of the year.

The statistics for the interchanges of television programs and news items between the television networks and stations participating in Eurovision by terrestrial

circuits show that the number of transmissions other than news coordinated by the EBU Eurovision division increased significantly from 5803 in 1976 to 6042 in 1977, whereas the total number of news items decreased from 5914 to 4994 during the same period. Although it is not apparent from the fact that the total duration of all types of transmission decreased slightly from 2930 to 2893 hours, further examination of the statistics shows that there is a trend towards unilateral transmissions, often arranged at short notice, instead of the more elaborate multilateral transmissions planned well in advance. Thus, the amount of work undertaken for coordination purposes is in fact increasing, since it depends more on the number of transmissions than on their duration.

There are several reasons to believe that the long period of growth that has been characteristic of the Eurovision interchanges during the past twenty years may now start to slow down. Until recently, this growth was assured by the continuing extension of the terrestrial telecommunications network to link additional broadcasting organizations, but now virtually all potential participants have access. Furthermore, the number of program and news items that are of sufficient international interest to attract an audience abroad is limited and not generally under the control of the broadcasting organizations. Also, in the present economic conditions, in which the costs incurred by broadcasting organizations are in many cases increasing more rapidly than their incomes, full account must be taken of the law of diminishing returns, so that stations and networks must maintain a balance between all possible program sources.

Thus, the new Eurovision coordination center, which is now being installed within the national production center of the Belgian broadcasting organizations B.R.T. and R.T.B. in Brussels, will not be equipped initially to handle traffic greatly in excess of the peaks that have already been encountered, although the possibility of future expansion has, nonetheless, been foreseen.

Unlike the original temporary coordination center, located underneath the dome of the Brussels law courts building, the new Eurovision center will provide modern amenities for the staff and extensive remote-control facilities. These should be especially useful in dealing with unilateral transmissions requested at short notice. The center is being constructed as a turn-key project costing \$700,000 by the British firm, Crow of Reading, and it is expected that it will be taken into service during the first half of 1978.

Studies are continuing on the possible use of the European Communication Satellite (ECS) for distributing a part of the Eurovision traffic. This satellite is scheduled to be launched in 1980, and it is intended to carry both telephony and television traffic. An Interim Eutelsat organization has been set up by the CEPT, and negotiations have started with the EBU on a contract by which the EBU would permanently lease two transponders. No decision has yet been taken by the EBU to participate in the ECS scheme, but it has expressed a clear interest, provided that the tariffs for the satellite and the Earth-stations (operated by the PTTs) are such as to make the system economically attractive.

There is little to report with regard to

direct broadcasting satellites, following the successful conclusion of the Planning Conference at Geneva as foreseen in last year's Progress Report. (See *Journal*, p. 320, May 1977.)

A detailed analysis of the Plan for Regions 1 and 3 (Europe, Africa and Asia) has been prepared by the EBU using a computer and published as a technical document in several parts. Studies are now proceeding on the arrangement for the up-links on the possibility of transmitting the sound accompanying television by means of a digital signal multiplexed within the vision signal, and on the possible interference between satellite transmissions and radio-navigation services. The attempt to launch the experimental European telecommunications satellite OTS from Cape Canaveral on 13 September 1977 was unsuccessful, but it is hoped that a replacement can be launched during the spring of 1978. This will enable experience to be obtained in the practical operation of domestic satellite receiving equipment, although the relatively low power radiated will require larger antenna systems than those foreseen in the plan to be used.

The latter constraint will not apply in the case of the experimental broadcasting satellite (H-SAT) which is currently being discussed by the European Space Agency. This would provide a power flux density corresponding to that given in the plan agreed upon by the World Administrative Radio Conference in 1977. Thus, broadcasting experiments could be made on a larger and more realistic scale. No final decision on the future of this project has yet been made by the ESA, but the EBU is already making preliminary plans for technical and program experiments.

Table I. Expansion of television during 1977: principal characteristics of the television services participating regularly in Eurovision at the end of 1976 and 1977.

Country and programme designation	Transmission system*	No. of television transmitters		Coverage of population %		Programme hours per week		Network km		length cable		Estimated No. of receivers (thousands)		Estimated No. of receivers per 100 pers.	
		1977	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977	1976	1977	
Algeria RTA	B - PAL	40	40					2800		0		640	440	4.0	2.8
Austria ORF-1 ORF-2	B(G) - PAL G(B) - PAL	221(101) 289(27)	209(81) 263(18)	90.9 87.7		64.2 46.7	62.9 43	7976	7858	72	72	2100	2050	28.2	27.2
Belgium BRT-1 BRT-2 RTB-1 RTBis	(B)H - PAL H - PAL (B)H - PAL H - PAL	(3)3 5 (11)2 5	(4)6 ⁹ (11)7 ⁹	90 99.8 94.9 78	99.8	54.0 6.3 59.8 6.5	55.4	2027 3798		0 0		2700			27.5
Denmark DR	B - PAL	30	30	99.9	99.9	44.9	44	4278	4278	124	124	1800	1700	35.3	33.5
Finland YLE-1 YLE-2	B(G) - PAL G(B) - PAL	67(2) 21(18)	64(1) 17(16)	99 89	99 86	62 32	62 30	10613	10239	0.5	0.5	1500	1400	31.6	29.5
France TF1 A2 FR3	L-SECAM (E) ⁷ L-SECAM L-SECAM	258(1169) 1087 323	1164(183) 1034 195	40(99) 99 96	28(99) 98 94	78.5 ⁴ 73 ⁴ 38.5 ⁸	78 ⁴ 74 ⁴ 32 ⁸	46538	43475	413	350	15500	15000	29.4	28.5
Germany (F.R.) ARD-1 ZDF ARD-3	B(G) - PAL G(B) - PAL G(B) - PAL	1046(275) 1792(2) 1859(2)	1000(229) 1714(2) 1688(2)	97.1 97	97.1 97.3 94.9	67.5 ⁶ 45 ⁵	64.8 ⁶ 65.5 44.5 ⁵		32082		740	19100	18500	31.5	30.5
Greece ERT	B	77	17	95	95	61.5	61	4600	3020	13	13	1200	1070	13.7	12.2
Ireland RTE-1	I - PAL (A)	24(7)	21(7)	98	98	65 ⁴	64.5 ⁴	2078	2410	11.5	0	650	625	20.4	19.6
Italy RAI-1 RAI-2	B(G) - PAL G - PAL	822(3) 469	804 437	98.72 96.86	98.7 96.6	62.8 62.6	63.5 50.4	31200	31200	277	277	12700	12500		22.3
Libya LJB	B - SECAM	13	11	85	80	64	60	3000	2594	0	0		100		7.5
Luxembourg RTL	L-SECAM(C-PAL)	1(2)	1(2)	92(99)	92(99)	47.5	40	16	16	0	0	87.5	86	24.3	23.9
Malta TVM RTI	B G	1 1	1 1	99 90	99 90	40 20	40 20	5	5	0	0	85	80	25.6	24.0
Monaco TMC-1 TMC-2	L-SECAM(E 625) G-SECAM	2(1) 1	(1) 1	99.9 99	100 80	40 40	32 17.5	16	16	0	0		10		50
Morocco RTM	B-SECAM	24	24		80		41		4108		0	650	600	3.5	3.3
Netherlands NOS-1 NOS-2	B(G) - PAL G - PAL	4(9) 13	4(9) 13	100 99	100 99	47.8 ⁸ 35.8	49 ⁴ 36	3068	3068	218	218	3900	3800	28.2	27.7
Norway NRK	B(G) - PAL	905(2)	767(1)	96.5	96.4	45.4 ⁴	45.8 ⁴	12163	12163	16	16	1200	1180	29.8	29.2
Portugal RTP-1 RTP-2	B ** G **	35 6	34 6	82 32	80 32	93.2 ⁴ 19.7	73 ⁴ 21	3514	3514	0	0	1200	920	12.7	9.3
Spain TVE-1 TVE-2	B(G) - PAL** G(B) - PAL**	717(1) 79(5)	717 62(5)	94 63	93.5 61	77 37	75.3 31.1	16518	14272	0	0	8500	7425	24.0	21.0
Sweden SR-1 SR-2	B(G) - PAL G - PAL	220(11) 228	215(10) 201	99.6 99.2	99.6 98.9	40 35.2	47.2 36.7	33300	31500	625	610	3100	3000	37.5	36.4
Switzerland SRG SSR TSI	B(G) - PAL B(G) - PAL B(G) - PAL	186(139) 62(233) 48(259)	176(109) 58(160) 47(180)	99.1 95 95	99 93 93	63 56 54	60 53 53	2320	2320	0	0	1900	1850	30.2	29.4
Tunisia RTT	B-SECAM	14	7	98	98	60	56	2600	2600	0	0		260		4.3
Turkey TRT	B	58	45	81	66	43 ⁴	62 ⁴	2644	2284	0	0	2500	1800	6.2	4.5
United Kingdom BBC-1 BBC-2 IBA	I - PAL (A) I - PAL I - PAL (A)	315(110) 312 301(47)	261(110) 261 247(47)	97.8 97.8 97.8	97.5 97.5 97.7	97.5 71.5 96	93 70 93	9575 7135	8949 5900	851 670	851 430	19000	18500	34.0	33.1
Yugoslavia JRT-1 JRT-2	B(G) - PAL G - PAL	332(4) 36	389 141		95 30		79 ⁴ 36 ⁴		18271		0		3700		17.1

Notes: Where the same programme is transmitted by means of two different systems, the brackets () identify the corresponding characteristics.

* The various transmission systems are identified by means of the letters used in C.C.I.R. Report 624.

** Experimental colour transmissions

Table II. Figures available as of 31 December 1977 for color broadcasting by the EBU active members.

Country	Number of transmitters		Colour programme hours per week		Coverage of population				Estimated No. of colour receivers (thousands)	
					Percentage		No. of persons (millions)			
	1977	1976	1977	1976	1977	1976	1977	1976	1977	1976
Algeria - RTA	40									
Austria - ORF-1 ORF-2	290 281		61 44.5	59.8 40	90.9 87.7		6.8 6.8			
Belgium - BRT-1 BRT-2 RTB-1 RTBis	6 7		52.2 6.0 57.5 6.5	53.9 57.7	90 99.8 94.9 78	99.8 92.8	9.3 9.3		850	
Denmark - DR	30		36.7	32	99.9	99.9	5.0	5.0	900	650
Finland - YLE-1 YLE-2	65 33		30 21	28 19	99 89	99 86	4.6	4.6	450	360
France - TF1 A2 FR3	7 1034 195		78.5 73 38.5 ^b	60 70 33 ^b	40 99 96	28 98 94	52	52	4500	3200
Germany (F.R.)-ARD-1 ZDF ARD-3	1229 1716 1690		64.1 ⁶ 64.8 41.5 ⁵	60.8 ⁶ 64 40.5 ⁵	97.1 97.3	97.1 97.3 94.9	60	60		10 500
Ireland - RTE	21		61.5	64.5	98	98	3	3	160	125
Italy - RAI-1 RAI-2	804 437		27.3 28	6.1 7.1	98.7 96.9	98.7 96.6	55	-	750	500
Libya - LJB			6		85		2.1			
Luxembourg - RTL	3		47.5	40	99	99	0.3*	0.3*		
Monaco - TMC-1 TMC-2	1 1		40 40	16 16	99.9 99	100 80	0.05*	0.05*		
Morocco - RTM	24			41		80		12.6	9	5
Netherlands - NOS-1 NOS-2	13 13		45.2 33.8	46.6 34.1	100 99	100 99	13.7	13.7	2550	1700
Norway - NRK	768		40.4	40.2	96.5	96.4	3.9	3.9	460	320
Spain - RTVE-1 RTVE-2	717 67		51 19	30 15	94 63	93.5 61	30	30	900	460
Sweden - SR-1 SR-2	225 201		37.1 33.5	41.9 33.2	99.6 99.2	99.6 98.9	8.2	8.2	2050	1750
Switzerland - SRG SSR TSI	345 295 307	285 218 227	63 56 54	60 53 53	99.1 ¹ 95 ² 95 ³	99 ¹ 93 ² 93 ³	6.3	6.3	600	530
Tunisia - RTT	7		30	32.8	98	98	6.0	6.0		3
United Kingdom-BBC-1 BBC-2 IBA	261 261 247		97.5 71.5 96	86.5 65.1 86.5	97.5 97.5 97.8	97.5 97.5 97.5	51	51	11000	10 000
Yugoslavia - JRT-1 JRT-2	389			20 23 ⁵		95 30		20		400

* Major additional coverage in neighbouring countries

Remarks concerning the tables:

- ¹Proportion of population within the coverage area of at least 1 programme service
- ²Proportion of population within the coverage area of at least 2 programme services
- ³Proportion of population within the coverage area of at least 3 programme services
- ⁴Data include duration of educational programmes that are not broadcast throughout the year
- ⁵Average figures applicable in the regions in which this service is provided
- ⁶Certain transmitters broadcast a further 18.5 hours per week
- ⁷Some broadcasting in 819-Lines in monochrome
- ⁸Certain transmitters broadcast a further 32 hours per week, relaying TF1 in colour