

"ISSUES OF WORLDWIDE COLOUR TELEVISION STANDARDS"

Chairman's remarks : 2.00 p.m.

Appreciation etc

This afternoon we have a particularly interesting set of papers on television problems, all of which are of worldwide ^{and immediate} interest. The choice of a colour television standard is one that will increasingly affect both the broadcasting authorities and the public in most countries of the world. There is considerable difference of opinion about what should be done and those countries that have already reached a decision ^{on the system to be used} are very fortunate to be spared much of the heart-searching which goes on in countries which have not yet done so. In Europe these considerations ^{US experience galvanized but in} are in full swing. Several countries in Europe have announced plans for the start of regular colour services in the second half of 1967. How many systems will be used will not be clear until after the Oslo Conference in June but it seems almost too much to hope for that it could be only one, desirable and even logical as this would be.

Television programme exchange all over the world is advancing very rapidly and means now exist for programme exchanges by relaying by satellites that were virtually undreamed of a decade ago. These facilities will undoubtedly increase at a very rapid rate, while direct broadcasting from satellites is probably also not too far in the future. All this adds strength to the argument for the greatest possible degree of agreement on world standards of colour television or, if this cannot be achieved, then for the provision of adequate means of translating from one set of television standards to another and from one colour television system to another.

In Europe we have unity on the 50 field approach, but not much unity in other matters, even in black and white. For historical reasons we have, at present, different line standards in various countries, although there is a move towards unification, and we can expect, perhaps before too many years have passed, that we shall have 625 lines only in Europe. The world ^{that is} will then settle down for a number of years to having 625 and 525 only, as

far as the number of lines is concerned. But it looks as though the world will be split into the 50 field area and the 60 field area for a very long time to come, but eventually we may have a line frequency which will be as near as no matter the same in all areas. This was one of the fortunate provisions of the television planning under the C.C.I.R. that was accomplished some 15 or so years ago. That this line frequency is common simplifies considerably many aspects of the problems of programme exchange.

Programme exchange in the future is much more likely to be on video tape than on film so three conversion problems will exist. Firstly, to change the field frequency; secondly, to change the line frequency - but this is a problem largely solved by recent developments; thirdly, to convert between television systems. There is so far only one colour television system ^{in service} in the world; this is the NTSC 525-line system using a 6Mc/s band. There may be a 625-line NTSC system using an 8Mc/s band and there may also be one or two additional systems using the basic principles of the NTSC system in the separation of the chrominance and luminance signals but with different methods of modulation on the chrominance sub-carrier. There is therefore a problem of programme conversion of considerable complexity but the work which will be outlined this afternoon goes a long way to resolving these problems and there is also, of course, considerable hope that in the event the number of television systems to come into service will be less than now seems possible. All countries realise the importance of reducing standards to a minimum and this aim will be in the minds of all the delegates to the discussions at Oslo this summer.

Another matter which is of the greatest importance in the choice of a colour system is the cost of the colour receiver, its ease of manufacture and its ease of maintenance and its reliability in the hands of the public. The results of experience on these factors comes from the use of the NTSC system in the U.S.A. This information, although it is of course derived from the operation of an NTSC system, will be of great interest in considering

other systems. This is because some 95% of the receiver is quite independent of the coding system used. The information that we shall receive therefore will be of particular interest as so much of what happens in the receiver applies equally to all systems, based as they are on the fundamental concept of the NTSC system of the separation of the signals into a luminance signal and a chrominance signal.

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