

benefit of all those members of the general public who are unable, or do not choose, to pay a charge.

The term "pay television" has been widely used as being synonymous with and limited to a system in which the picture is scrambled as sent out from the broadcasting station so that no member of the public who is not a subscriber to the service is able to secure that program in an intelligible form. Thus, it is argued that the non-subscribers to the system are being deprived, for the time and duration of the pay program, of reception of any program on that particular channel.

I am here to explain an alternative system of subscription or pay television, using that term in a broader and more correct sense. This alternative system makes it possible for a program broadcast on a single television transmission channel of standard width to be received in two satisfactory intelligible forms. One form is a color rendition available only for a charge and by the use of subscription equipment attached to a subscriber's receiver; the other form is black and white reception receivable on any conventional television set without charge and without any additional equipment.

Now at this point I want to emphasize that under this proposed system all non-subscribers to the pay or subscription system are nevertheless able to receive not only the conventional programs which they are today receiving free, but also they may receive any and each of the special or pay or subscription programs in monochrome (black and white) and without pay or charge. This is an additional dividend which is offered to the public, which they will not and could not possibly receive under the scrambled type of operation. Thus, I first call attention to the fact that we must dispel the misconception—widely held, I'll admit—that the use of any pay television system would deprive the public of the use of the channel in question, and above all would forbid the public from receiving that particular program. The pay system which I am now proposing and discussing has no such limitation or handicap. Under this new system, which may perhaps be described as a two-level system, the public is not deprived of anything. On the contrary, the public non-pay viewers are able to gain free access to pay programs of the very highest quality and many of which would not otherwise be put on the air because of their cost of production.

Under this two-level system, any owner of a receiver, whether monochrome or color, who is within receiving range of the broadcast station may receive that special program in just as fine a rendition, as far as picture is concerned, as the person who makes the payment. The difference is only that the non-payer has the picture presented to him in monochrome whereas the subscriber and payer pays money to receive the same program in color. Thus, all TV sets could be tuned into the same program—but only those who could afford color sets would be paying for the advantage of color, if they wish it.

Having thus briefly outlined this proposed two-level pay or subscription television system I pass to certain other observations which are of importance from the practical standpoint of television broadcasting and receiving techniques.

1. Any broadcasting station can be brought within the sphere of the operations already outlined. It is not necessary to provide special broadcasting equipment to enable production of the results and operations which I have described. In other words, the additional equipment necessary in a conventional broadcasting station would be minimal, and the required alterations would be neither extensive nor expensive. Furthermore, the system is one that does not require the use of any new channels to carry special program signals. The operations already defined require no change in the channel frequencies, no enlargement of the channel width or other interferences with previously established and assigned channels.

2. This proposed system does not require any change in the circuitry of any receiver, either monochrome or color, in the hands of non-subscribers to the service. All such receivers will be able to receive the special pay program without pay or charge operation, but in monochrome.

3. This proposed system does not require any change or modification of the internal circuitry of the color receivers used by the subscribers to the service; neither does the use of this system require any connection into the circuitry of such receiver other than connection to existing external terminals.

4. The operations by which the system is made available are extremely simple in themselves. I will try to explain in brief, non-technical terms why the system is entirely feasible. Not only can it be achieved at a very minimum of cost for change of equipment in the sending station, but the possibilities of trouble developing after long usage are minimized. In brief: