The Evolution of Colour - via Technicolor. Syd Wilson. BSC

The Technicolor Motion Picture Corp first appeared in 1915. Its origins were based in a firm of Boston engineers, Dr Herbert Calmus, D.D Comstock, and W.B.Westcott, assisted by E.J.Wall of "Dictionary of Photography" fame. They were expriementing with a camera which had a prism divider to give 2 sperate images. Prints were made from the images, then projected by 2 projectors each with appropriate colour filters so when converged on a screen they gave a colour picture. The first film produced in this way was "The Gulf Between", with Grace Diamond and Niles Welsh playing the leads. During the period 1916-19 a railway car containing a fully equiped laboratory was used, this enabled them to shuttle around the States photographing functions.

A pilot plant was built in Boston in 1919. In that year, they went over to a system of making seperate prints of the two images dyeing them each in appropriate colours, then cementing them 'back to back'. The first film produced in this manner was "The Toll of the Sea" directed by Chester Franklin with Anna May Wong in the lead. Other outstanding films made by this system were MGM's "Ben Hur", and Douglas Fairbanks "Black Pirate". In 1923 a new plant was erected in Boston and a small laboratory in Hollywood, this had a capacity of 1,000,000 feet per month.

The big breakthrough came in 1928 when the dye transfer transfer 'imbibition' process was adopted, but still as a two colour process. This sytem had been suggested as early as 1906 by E.J Wall as a colour system for cinematography and printing.

During 1929 Dr Calmus came to London to meet Kay Harrison of Gerrard Industries Ltd to discuss the setting-up of a Technicolor plant in England. At the time Gerrards were interested in the British process "Cinecolor".

1932/33 saw the first 3 strip beam splitting camera completed and a three colour 'imbibition' process perfected. The first film made with this system was Walt Disney's "Flowers and Trees" using a successive frame camera. The first three component studio film was "La Cucaracha". In 1935 the first three colour picture with exteriors was Pioneer Picture's "Becky Sharp".

Technicolor Ltd was formed in England in 1935, Technicolor Motion Picture Corp had 50% of the shares, the other 50% were owned by London Film Productions, Gerrard Industries and Prudential Insurance.

A laboratory was built in Harmondsworth,Middlesex. Kay Harrison became the Managing Director, the first English feature was "Wings in the Morning" followed by "The Divorce of Lady X", "The Drum","Sixty Glorious Years ", and "Four Feathers".

In America, in 1942 Monopack(modified Kodachrome) was used for the first time, but for exteriors only on MGM's "Lassie Come Home". This was reproduced by Technicolor using seperations. Also 1942 saw the introduction of Kodak's new Monopack colour negative under the name "Kodacolor" . For this was sold only on the amateur market for several years, but was the forerunner of Eastmancolor negative .

Technicolor three strip negatives were developed on drums holding up to 1,000 foot lengths. When Eastmancolor negative came in at the beginning of the 1950's, processing was done on continous running negative developing machines. Up to this point Technicolor (UK) had its own Camera Dept headed by George Gunn. All 3 strip shooting was carried out by this Dept, the cameras were extremely heavy and when in 'Blimps' very bulky. The well known Lighting Cameramen in the Dept were Jack Cardiff, Geoff Unsworth, and Chris Challis. With the adent of Eastmancolor negative, which could be used in any camera, the camera dept was disbanded.

Our laboratory was equiped with one dye transfer machine,negative,picture, and matrix developing facilites, gray tracker printers and 4 matrix optical printers. There was of course many other peripheral facilites. This compliment remained until 1951 when 2 dye transfer machines were added. One other point, we had an excellent Drawing Office and Toolroom which designed and built all the machines, under the guidance of Harold Peasgood and later under Bill Reeves.

As Matrix printing was an optical process, the optical printers were designed "in house". This ability was very useful when in 1953 Cinemascope and Vistavision came in. This meant unsqeezing the double squeezed image of Cinemascope, as well as straight printing and reduceing to 16mm in both formats. Vistavision presented greater problems being an 8 perforation picture along the film, as opposed to across it. It meant several new

optical printers had to be built.

An Electronics Dept was set up in 1954 under the leadership of Laurie Atkin. They performed miracles over the years.

Todd AO came in 1955, this meant new 65mm negative and 70mm positive developers. Also required were 60mm to 70mm and reduction to 35mm and 16mm printing machines. Then in 1956 evolved our Technirama, this was similiar to Vistavision but it had a squeeze to give wide screen 35mm & 16mm and 35mm &16mm unsqueezed prints. This system of course gave very high quality 70mm prints. Then at this time Ultravision appeared, this similiar to Todd AO but with a squeeze. The lab now had 48 optical printers to cope with all these variations.

In 1955 we started to build a plant specially to deal with Eastmancolor printing and developing, including all 70mm work, this ran in parallel with dye transfer printing, Alf Cooper was in charge of this operation.

In 1959 a new system was developed known as "auto Opticals" and "selective" printing. All the negative was cut into one strip which did away with double printing on the A & B method, this of course was much faster and cheaper for the Producer. It also allowed scenes from existing cut films to be edited into the new film, retaining original negative quality, i.e, not going through 'dupes'. An example of this was "Storm over the Nile" where all the desert and battle scenes were taken from the original "Four Feathers" .

The Henderson Labs were purchased by Technicolor in 1961 from Warner 7 Arts. Bob Henderson remained its Managing Director until his untimely death.

Also in 1961 we took over the Pathe Labs, these had remained as a B&W only lab. The Newsreel was now 100% in colour, as was Pathe Pictorial, both being processed by Technicolor.

In 1962 the decision was made to completely automate the dye trasfer process, this in fact took until 1965 to complete. Also in 1962 we were taken over by The Eversharp Pencil Company Schick Razor Group, 30% of the shares were retained by EMI.

In 1964 the decision was made to set up a 'tape to film' system known as Vidtronics, this section was headed by John Mulliner and later by Ron Edgerton. It was eqiped with two Video projection systems, projecting into two fast 'pull down' cameras, there were 2 inch video recorders with "Editec" and ancillary equipment. This was completed in 1965.

Throughout the 1960's we developed an intensive 8mm system, and produced many educational and medical films. Portable projectors were designed and manufactured, which operated on a continuous loop cassette system. This eliminated threading up and rewinding and allowed for quick change from one film to another.

The early 1970's saw the end of dye transfer production and the company automated the Eastmancolor process, installing high speed printers and developers. The Vidtronics system was disbanded and a large quantity video duplicating system was added.

Guess what ?

Technicolor were re-inventing the dye transfer process !!!