

The point is then:-

$$\xi_0 = 0.b_1 b_2 \dots b_k | b_{k+1} b_{k+2} \dots$$

$$\text{if } \xi_0 = 0.b_1 b_2 \dots 0 | b_{k+1} b_{k+2} \dots$$

$$\text{then } \xi_k = 0.b_{k+1} b_{k+2} \dots$$

$$\text{or if } \xi_0 = 0.b_1 b_2 \dots 1 | b_{k+1} b_{k+2} \dots$$

$$\text{then } \xi_k = 0.b_{k+1}^* b_{k+2}^* \dots$$

So if reverse

$$\text{if } \xi_k = 0.011 \dots \text{ then}$$

$$\xi_0 = 0.b_1 b_2 \dots 0 | 011 \dots$$

$$\text{or } \xi_0 = 0.b_1 b_2 \dots 1 | 100 \dots$$

$$\text{whereas if } \xi_k = 0.101 \dots \text{ then}$$

$$\xi_0 = 0.b_1 b_2 \dots 0 | 101 \dots$$

$$\text{or } \xi_0 = 0.b_1 b_2 \dots 1 | 010 \dots$$

line of these
appears in
 ξ_0
as given.