149.3.4.1 Generation of S_n

During PMA training, the training pattern is embedded with indicators to establish alignment to the RS-FEC block and the 10~~15~~ partial PHY frames that comprise the block. The last partial PHY frame is embedded with an information field used to exchange messages between link partners. PMA training signal encoding is based on the generation, at time n, of the bit S_n. The first bit is inverted in the first 9~~14~~ partial PHY frames of each RS-FEC block. The first 96 bits of the 10~~5~~th partial PHY frame is XORed with the contents of the InfoField. Each partial PHY frame is 180 bits long, beginning at S_n where $(n \bmod 180) = 0$. See Equation (149– 8).

$$S_n = \begin{cases} Scr_n[0] \oplus InfoField_{(n \bmod 180)} & 2520 \le (n \bmod 2700) \le 2615 \\ Scr_n[0] \oplus 1 & \text{else if } (n \bmod 180) = 0 \\ Scr_n[0] & \text{otherwise} \end{cases} \quad (149\text{–}8)$$

$$S_n = \begin{cases} Scr_n[0] \oplus InfoField_{(n \bmod 180)} & 1620 \le (n \bmod 1800) \le 1715 \\ Scr_n[0] \oplus 1 & \text{else if } (n \bmod 180) = 0 \\ Scr_n[0] & \text{otherwise} \end{cases} \quad (149\text{–}8)$$