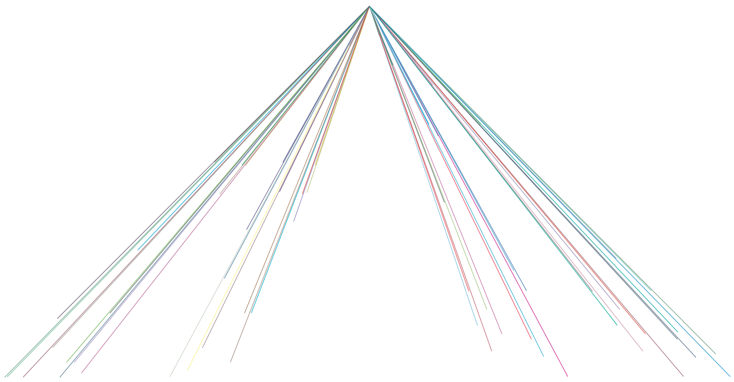

Figure 13.5.4: (A) Lelek Fan

13.5.4 Lelek Fan

We define the *Lelek Fan* F_L a subfan of the Cantor Fan F_C such that the set $E(F_L)$ of its end points is dense in F_L, and $S(F_L) = \{v\} \cup E(F_L)$ is a connected set (where v denotes the top of the two fans F_C and $F_L \subset F_C$).

It is known, that any two Lelek Fans are homeomorphic. See [39, p.9] . Moreover the Lelek Fan is homeomorphic to all its confluent images (see [37,]).

13.6 Planable continua

Planable continua are beautiful

13.6.1 Makuchowski Umbrella

Makuchowski Umbrella is a hereditarily locally connected continuum where each nonconstant open mapping is light. This property disappears when we cut out those vertical segments due to the horizontal projection on appropriate vertical segment.

See [60, Example 2.5].