RFS History

RFS: More than a century of innovation

Radio Frequency Systems (RFS) is built on more than 100 years of innovation and world firsts in multiple countries.

It all began in 1900 when the Hackethal Wire Company was founded in Hannover, Germany. Hackethal made electric cables, using an improved insulation technique patented by Louis Hackethal. A decade later, in 1910, the American Tube Bending (ATB) company was established in New Haven, Connecticut. ATB specialized in custom tube bending and built the engine manifold for the famed "Spirit of St. Louis" aircraft.

Cable, antenna and cellular innovators

By 1959, ATB had formed a relationship with American cable producer, Phelps Dodge, which had purchased the Communication Product Company (CPC) three years earlier. Founded by one of Guglielmo Marconi's students, CPC builds flat antennas for use in defense equipment. By 1955, the company produced high-gain base station antennas. During this period, CPC also began partnering with the prestigious Bell Labs to develop early cellular technology.

Meanwhile, the Hackethal Wire Company had developed a very substantial portfolio of patents and a strong reputation as an innovative and visionary player in the cable industry. Many of the Hackethal Wire Company's inventions are still proudly used by RFS today:

- 1951: The world's first radio frequency (RF) power cable with a corrugated steel outer conductor
- 1957: The FLEXWELL® air dielectric cable, sold today under the RFS HELIFLEX® brand.
- 1961: The FLEXWELL elliptical waveguide, the world's first corrugated elliptical waveguide
- 1962: CELLFLEX®, the world's first corrugated seam-welded foam dielectric cable.

By 1966, Hackethal had become Kabelmetal. And, in 1972, Kabelmetal produced the world's first smooth wall radiating coaxial cable, today's RFS RADIAFLEX® product line.

The innovators unite as RFS

In 1983, France-based Alcatel combined Kabelmetal, its U.S.-based subsidiary, Cablewave Systems, and the former CPC — now called Celwave R.F. — under the RFS Group banner. In 1999, the RFS Group became a separate company called Radio Frequency Systems with Alcatel (the future Alcatel-Lucent) as its parent company. Celwave and Cablewave became RFS USA, headquartered in Meriden, Connecticut.

RFS first organized its activities by product line, but, in 2009, reorganized around 4 business units:

- Wireless Infrastructure Solutions: Base station antennas and RF conditioning products
- RF Transmission & Distribution Solutions: Transmission lines and wireless indoor solutions
- Radio Link Networks: Microwave antennas
- Broadcast & Defense Systems: TV, radio, high frequency and defense products
- Today, RFS is a truly global company with:

- 8 manufacturing facilities: USA, Brazil, France, Germany, United Kingdom, China, Australia and India
- 5 R&D centers: USA, France, Germany, China and Australia
- More than 30 sales offices and technical support centers in more than 20 countries

The RFS innovation timeline

1900: Louis Hackethal's wire insulation technique is patented.

1927: The Spirit of St. Louis takes off with an American Tube Bending (ATB) company engine manifold

1939-1945: The Communication Product Company (CPC) builds flat antennas for use in defense equipment

1951: 1st RF power cable with a corrugated steel outer conductor

1955: CPC begins building high-gain base station antennas

1956: CPC begins working with Bell Labs on early cellular technology

1957: FLEXWELL air dielectric cables are developed (HELIFLEX today)

1961: 1st corrugated elliptical waveguide (FLEXWELL)

1962: 1st corrugated seam-welded coaxial cable (CELLFLEX)

1972: 1st smooth wall radiating coaxial cable (RADIAFLEX)

2006: 1st coaxial cable featuring an aluminum outer conductor (CELLFLEX LITE)

2009: 1st hybrid feeder cabling solution for remote radio heads (HYBRIFLEX)