

VECTOR

Versatile Easy installable Connector implementing new Technologies for accelerated fibre Optic network Roll-outs in Europe



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Contact

Name: Dr. Stephane

BERGHMANS

Tel: +32 16 35 20 35

E-mail:

Stephane.Berghmans@te.com

Affiliation and Address:

Tyco Electronics Raychem bvba

Diestsesteenweg 692

B- 3010 Kessel-Lo

BELGIUM

Web site:

www.vector-fp7.eu

Timeline:

Start Date: 01/10/2012

End Date: 30/09/2015

Budget:

Overall Cost: 4.442.252 EUR

Funding: 3.100.000 EUR

Project Partners:

- Tyco Electronics Raychem bvba – TEC, BE
- DEMCON Advanced Mechatronics BV – DEMCON, NL
- Celoplás – Plásticos para a Indústria SA - Celoplás, PT
- Vrije Universiteit Brussel – VUB, BE
- Universiteit Gent – Ugent, BE
- Telekom Deutschland GmbH – TDE, DE
- Telecom Italia S.p.A. – TIT, IT

Vision & Aim

VECTOR aims to develop and commercialize an innovative low-cost highly performing field installable **connectivity system** that will impact at a multi-million-euro scale the capital expenditure (CAPEX) and the operation expenditure (OPEX) of telecom fiber broadband networks and that will facilitate the achievement of the European 2020 objectives for broadband connectivity.

The **VECTOR connectivity system** will comprise a **ferrule-less connector** granting ultra-high optical performance and a **fully automated installation tool** allowing for field installation by a general-skill technician.

Disruptive fibre-handling techniques based on heat-shrinkable materials, advanced textiles, and plasma-shaping will be developed and incorporated in the installation tool to ensure reliability, whereas high-tech gels and micro-mechanical alignment systems will be included in the connector to yield superior optical performance. Finally, micro-fabrication and replication techniques will be proposed to ensure ease of volume production at low price. The use of connectors instead of permanent splices will grant flexible reconfigurability of the network.

Overall, VECTOR aims to outperform the state-of the-art of ferrule-based connectors in terms of optical performance, flexibility, reliability and cost. This will ultimately break the current paradigm of ferrule-based optical connectivity requiring extensive pre-engineering and highly specialized manpower for field deployment.

In order to succeed in this ambitious goal, we created a consortium comprising the full portfolio of **required technical knowledge**, as well as **the critical mass** necessary to turn our connectivity system into a **commercial reality** that potentially can be deployed in **the European optical networks**.



The VECTOR connectivity solution will allow dust-free and reliable field installation, contrary to current solutions (see picture).