

# Curriculum Vitae (short)

This short CV includes both the business related activities at Prof-Tel Oy (1991 -), at LUT in the telematic professorship (1988-2012) and at Telecom Finland (1973-1991).

**Name:** Kerttula, Esa Johannes, Prof. Dr., born 21. August 1948, in Kemi, Finland, Finnish citizen.

**Address:** Långhagintie 32, 02400 Kirkkonummi, Finland, mobile: +358 45 6700 447,  
e-mail: esa.kerttula@proftel.fi

**Education:** Dr. Tech. degree in Communications Engineering in Helsinki University of Technology (1988), Stanford Executive Program (SEP 89) in Stanford Business School, USA (1989).

**Languages:** Native Finnish language, English and Swedish fluent, German good.

## International memberships:

Senior Member of IEEE (*The Institute of Electrical and Electronic Engineers*), member of ACM (*Association for Computing Machinery*) and member of IACR (*International Association for Cryptologic Research*).

**Publications:** More than 60 consulting reports (with Prof-Tel Oy Ltd) and more than 70 technical and business publications, and about 150 other publications.

Three professional books:

- *Error Characteristics and Simulation of Error Control with Quality Criterion in 9600 bit/s Public Switched Telephone Channels for Digital Group 3 Facsimile*, Dissertation, in Acta Polytechnica Scandinavica (El 60), Helsinki 1987.
- *Multimedialla tiedon valtatielle* (in Finnish), translated as “Multimedia in Information Highway”, Edita 1996, 396 pages.
- *Tietoverkkojen tietoturva* (in Finnish), translated as “Security and Cryptography in Information Networks, 3<sup>rd</sup> ed., Edita 2000, 510 pages.

**Awards:** In 1990 the Technology Advancing Prize for the core development of *TeleSampo*, the Value Added Network launched by Finnish PTT in 1987. TeleSampo, the “pre Internet-Web”, has been in commercial use from 1986 up to the end of 2004.

**Military rank:** Captain (Res.)

## Professional record:

1991- Managing Director (and owner) and telecommunications consultant, in **Prof-Tel Oy Ltd** (incorporated in Finland in 1991), about 60 consulting cases mainly in Finland for telecommunication operators, telecommunications authorities, service providers, telecommunications and computing industry, broadcasting companies and major users. Some international studies.

2000-2001 VP, Director, PKI Business Technology Development and Business Innovations, Sonera SmartTrust, Düsseldorf, Germany. Leading business oriented development projects related to PKI-based information security. Sonera is now part of TeliaSonera.

- 1989-1991 Director of Telematics Division (directly some 70 people, some 30 undirectly) in Posts and Telecommunications of Finland (Finnish PTT, then Sonera), responsible for telematics business; strategic and technology planning, marketing, investment budgeting, procurement and operations (*TeleSampo* information network, *Telebox* and *Mailnet* e-mail services, *Edivan* EDI services, *Telematics Laboratory* in Lappeenranta, Finland).
- 1988-1989 Deputy Director of Non-Voice Communications Division (Finnish PTT).
- 1984-1988 Head of Telematics Section in Data Communications Department (Finnish PTT).
- 1973-1984 Several planning, research and development positions in Data Communications Department (Finnish PTT).
- 1988-2012 *Professor* (in Telematics, part-time) in the Communications Software Laboratory of the Department of Information Technology of the Lappeenranta University of Technology (LUT). More than 2500 students have participated in telematics and other courses of Prof. Kerttula during 1988-2012 (see CV long). Retired in May 2012.

**Consulting experience with Prof-Tel Oy Ltd (1991- 2017):**

In the business areas of networking, wireless and mobile communications, mobile service providers, digital broadcasting, Internet, information security:

**Strategy, Business, Information society**

- business and technology strategies, business models, business plans, feasibility studies and analyses, technical due diligences,
- technology and business analyses in telecom acquisitions,
- mobile payment concepts and strategies,
- telecommunications and information security strategies and policies,

**Communications Technology and Theory**

- mobile communications and client technologies (2G, 2.5G, 3G, 4G)
- new access technologies and networks (wired, fiber, wireless, mobile), e.g. WiMAX, Flash-OFDM, cdma450 1xEV-DO, HSPA, LTE, ...
- broadband networks and technology, e.g. fiber network architectures, Open access, Metro Ethernet, Ethernet to First Mile (EFM), PON, wireless, ...
- multimedia technologies and applications,
- Value Added Services technologies and applications in wireless Internet

**Security, Trust and Privacy -- technology and theory**

- security technologies, theory and specifications in cryptography, certificates, security architectures and protocols, smartcards, other security tokens,
- electronic identification and authentication in wireless applications,
- Trusted Third Party (TTP) services and Public Key Infrastructure (PKI), Certificate Policies (CP) and Certificate Practice Statements (CPS),
- mobile ID, Digital Identity,
- critical information infrastructure protection (CIIP), cyber security.

**Board memberships:**

Prof-Tel Oy Ltd	chairman and owner	(1991 -)
Saunalahti Group Oyj	board member	(2001 -2003)
Radicchio Scientific Advisory Board	board member	(2002 - 2003)

Kirkkonummi  
10. May, 2017  
Dr. Esa Kerttula