



## **Certificate of Recognition of Vladimir Krstic's Work during the V.32 Modem Development**

During the period of 1987/1988 two companies, Penril Datacomm, Gaithersburg, U.S.A. and Mihajlo Pupin Institute, Belgrade, Yugoslavia, worked jointly on the development of a V.32 modem. Vladimir Krstic, as a part of Pupin's engineering team, was directly responsible for developing the T/2 fractionally spaced equalizer and the carrier recovery module (including both the Phase Lock Loop (PLL) and the phase jitter predictor). Mr. Krstic did an excellent job in coding software simulations for all relevant algorithms, as well as verification, tuning and final coding, including implementation and testing of the algorithms on the TMS320C25 based platform. His work has been recognized as one of the major contributions in achieving the high performance level of the Penril V.32 modem.

A handwritten signature in cursive script that reads "Richard L. Stuart".

Richard L. Stuart  
Vice President Technology

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