



# Protocols for Developers



## eNewsletter #7

*“TeleSoft gets a very high grade for being solid, reliable, and dependable...rock-solid throughout the whole project. Performance was also quite good. Didn't have to touch the TeleSoft code.”*  
– 3COM Primary Access

*"Telesoft has always been a great partner helping us to integrate the ISDN stack into our application. Their code and support is superior. That's what sets them apart."*  
– Voyant Technologies

*“TeleSoft code reduced our time-to-market by at least two man years.”*  
– Workstation Technologies

### NEWS ITEMS

- \* **New Website**
- \* **New Product Example**
- \* **High Availability – Carrier Class Source Code**
- \* **Expanded RTOS Support**
- \* **Open Source Software**

We have been busy adding new software modules, interfaces, and drivers and we have updated our website.

### NEW WEBSITE

Check out our latest and greatest website - we've added more content and made it easier to navigate as well. Suggestions for further improvements are always welcome. (Please contact us at [sales@telesoft-intl.com](mailto:sales@telesoft-intl.com)).

### NEW PRODUCT EXAMPLE

Are you developing a product for the embedded switch, enhanced services or PBX market? If so, you almost certainly will need to provide High Availability, Redundancy and Fault Tolerance capability in your hardware and software.

- Embedded switch environment requires multiple PRI variants, as well as live reconfiguration of PRI ports,
- Enhanced services market additionally requires voice processing,
- PBX design also needs to support a range of standards-based Voice Supplementary Services for the country or switch variants supported by the PBX. PBXs usually incorporate BRI (for telephone access), PRI (to talk to the Central Office) and QSIG (so they can communicate with each other).

For a real example of this type of product checkout the impressive TelcoBridges High Density Trunking Card. It supports as many as 64 PRI ports populated on a single Compact PCI card, with CAS, IVR, aLaw to  $\mu$ Law conversion and echo cancellation available on all channels ([www.telcobridges.com](http://www.telcobridges.com)).

## HIGH AVAILABILITY – CARRIER CLASS SOURCE CODE

High Availability (HA) and Fault Tolerance (FT) are important if you are designing a denser system with more than a few ports per board. System architectures and their implementations can vary quite widely between customers, so it is important that the HA/FT software does not limit or constrain either the architectures or their implementations.

TsLink3 HA/FT software has been developed so that you can select the best possible method for your architecture. For more details, please visit our [HA White Paper](#) on our web site. Please note that TsLink3 signaling stacks can also sustain thousands of simultaneous connections via hundreds of ports.

## EXPANDED RTOS SUPPORT

Recent additions include support for: [LINUX](#), [OSE](#), [ATMOS](#).

"Every good stack deserves a good RTOS." We don't want to be the arbiters of choice for RTOSs, so we offer pre-ported interfaces for many of the well-known OSs. Check the list below for your preference - you'll find support for both pre-emptive and non-preemptive OSs. TsLink3 pre-ported interfaces are available for the following operating systems:

- ATMOS
- LINUX
- MQX
- Nucleus PLUS
- OSE
- pSOS+
- QNX
- VRTX
- VxWorks
- TsRITE \*

TsLink3 architecture is OS-independent, users have ported our stacks to a variety of OSs including:

- Solaris
- Windows
- Many Proprietary types including null OSs

\* TeleSoft TsRITE is a very compact Real-time, Multi-tasking OS kernel optimized for PowerPC, X86 and 68K processors.

## OPEN SOURCE SOFTWARE

There's a lot of interest in open source software, particularly the LINUX OS, because it is "free" and well proven. Of course you do have to pay for the necessary tools and technical support so there is a real cost to using LINUX. One big difference between the open source software and the protocol software licensed from companies like TeleSoft is in the area of indemnity against patent or trade secret infringement. The free distribution of LINUX and other software is conducted under the Gnu Public License (GPL), which provides no indemnity against patent or trade secret infringement. This is in sharp contrast to the source code licenses provided by TeleSoft and others that do provide indemnity against patent or trade secret infringements. Which type of license makes sense for you when you are developing an embedded system that is strategically important to your company?

TeleSoft code ported to run under LINUX uses two types of license: our standard source code license which includes indemnification for the TeleSoft code, and a

LINUX license called Lesser GPL (LGPL) which is provided by the LINUX distribution company. This is a "best of both worlds" approach by providing indemnification for the stack with ability to use the "free" OS.

### **CONTACT INFORMATION**

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