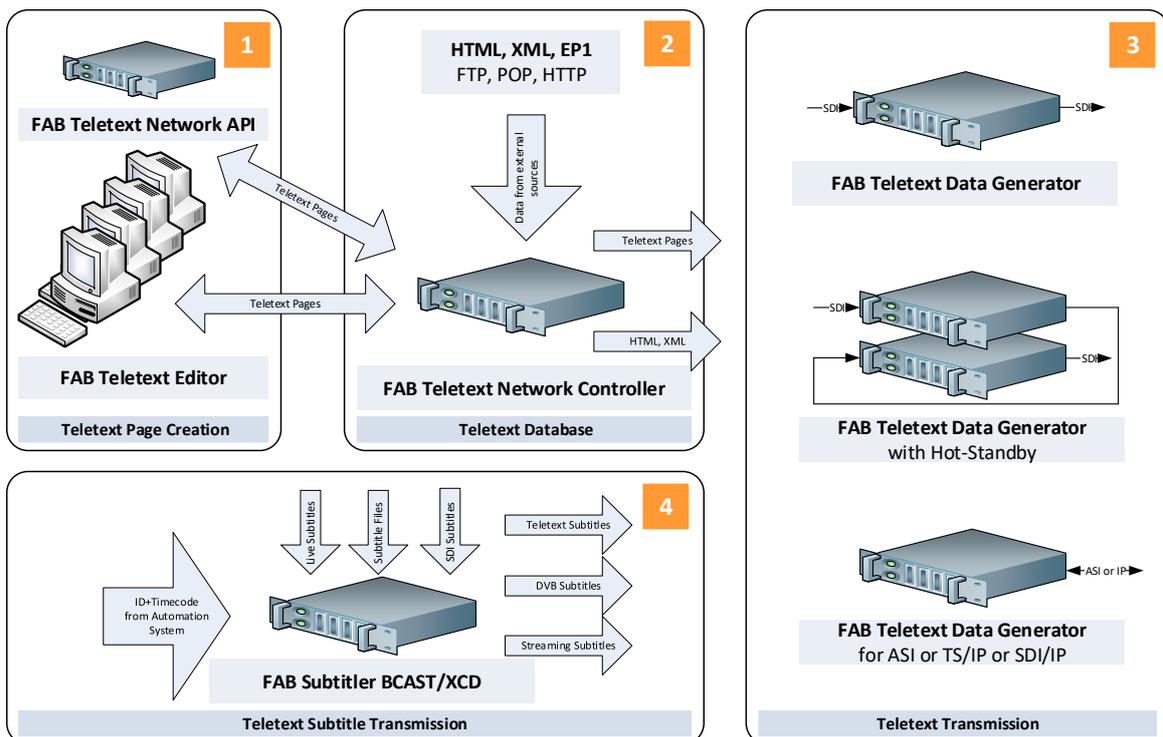




FAB TELETEXT SYSTEM OVERVIEW

FAB Teletext System

www.fab-online.com



The FAB Teletext System consists of the following components:

- Teletext Data Generator (Transmission with Hot-Standby Possibility)
- Teletext Network Controller (Database with Automatic Internet Interfaces)
- Teletext Editor Software for Windows
- Teletext Network API for creating 3rd party (interactive) applications
- Teletext Subtitling Preparation, Live/News Subtitling and Transmission

The system is used by the following major broadcasters:

- ZDF, BR, WDR Germany, TVE Madrid, ORF Vienna, TVP Warsaw, RTP Lisbon, RTBF Brussels...



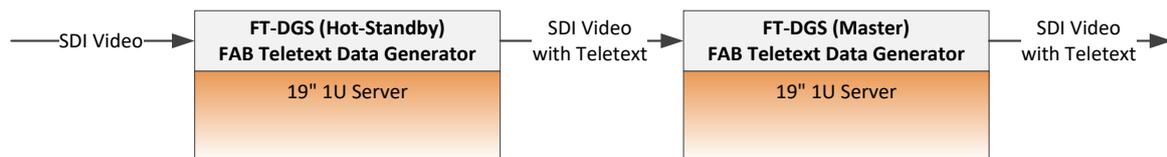
FAB TELETEXT DATA GENERATOR

FAB Teletext Data Generator is a complete unit based on a 19" 1U Server with SSD Disk and two power supplies. It is used for insertion of a teletext carousel with over 8000 teletext pages and teletext subtitles into SDI. In addition it can be used for transmission of VPS/PDC and WSS data.

The unit can accept teletext pages from two sources: TCP/IP and SDI video input. The following products can provide teletext pages over TCP/IP: FAB Teletext Editor, FAB Network Controller and FAB Network API. Teletext subtitles are provided by FAB Subtitler over TCP/IP.

When the Real Time Teletext Decoder Option FT-RTT 5 is activated the unit can insert teletext subtitles or interactive teletext pages received on the main/aux SDI input into the teletext carousel on the SDI output.

- FAB Teletext Data Generator is delivered as a 19" 1U unit with analogue & SD/HD-SDI video in/out BNC connectors for broadcast quality teletext insertion.
- Transmission of teletext subtitle pages in EBU system B according to international standard ETS 300706. Teletext pages and subtitles can be entered either via TCP/IP or from another teletext signal from page numbers specified.
- Insertion of teletext data into SD-SDI according to ETS 300706 and into HD-SDI according to SMPTE 2031 and OP47.
- Bypass relay which is activated in case of power, software or hardware failure.





FAB TELETEXT NETWORK CONTROLLER

The FAB Teletext Network Controller is a service application for Windows which is used for storage of teletext pages and their distribution to teletext data generators and export to other formats like HTML, XML, text files and more.

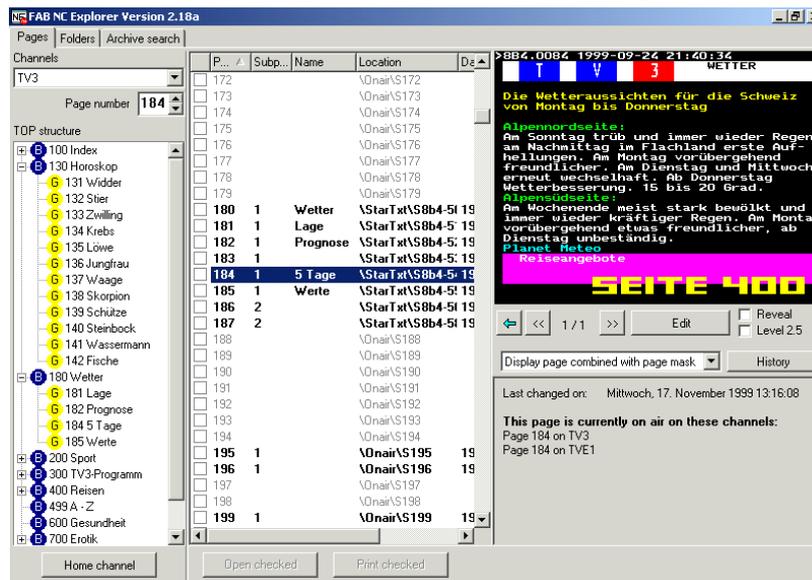
There are many different ways how teletext pages can be stored in the database:

- By opening and saving files with teletext pages directly over a shared network folder from FAB Teletext Editor or FAB Network API
- By using the FAB Teletext TCP/IP protocol to read and write pages
- By storing an XML, HTML or text file on a shared network folder and configuring automatic import on FAB Network Controller

FAB Network Controller will monitor teletext pages stored in the database and as soon as any teletext page is modified it will be distributed to all outputs. The outputs could be one or multiple Teletext Data Generators connected over TCP/IP, template based HTML Export (like <http://teletext.orf.at>), XML Export, Text file export and more.

The optional FAB Archive Server is a historical database of teletext pages which stores all teletext pages that have been modified and transmitted. The database allows searching for teletext pages based on transmission date/time, text content and channel. The maximum size of the archive depends only on the available hard disk size and therefore millions of teletext pages will be stored.

FAB Network Controller requires Windows Server and runs in a virtual machine and Windows Cluster.



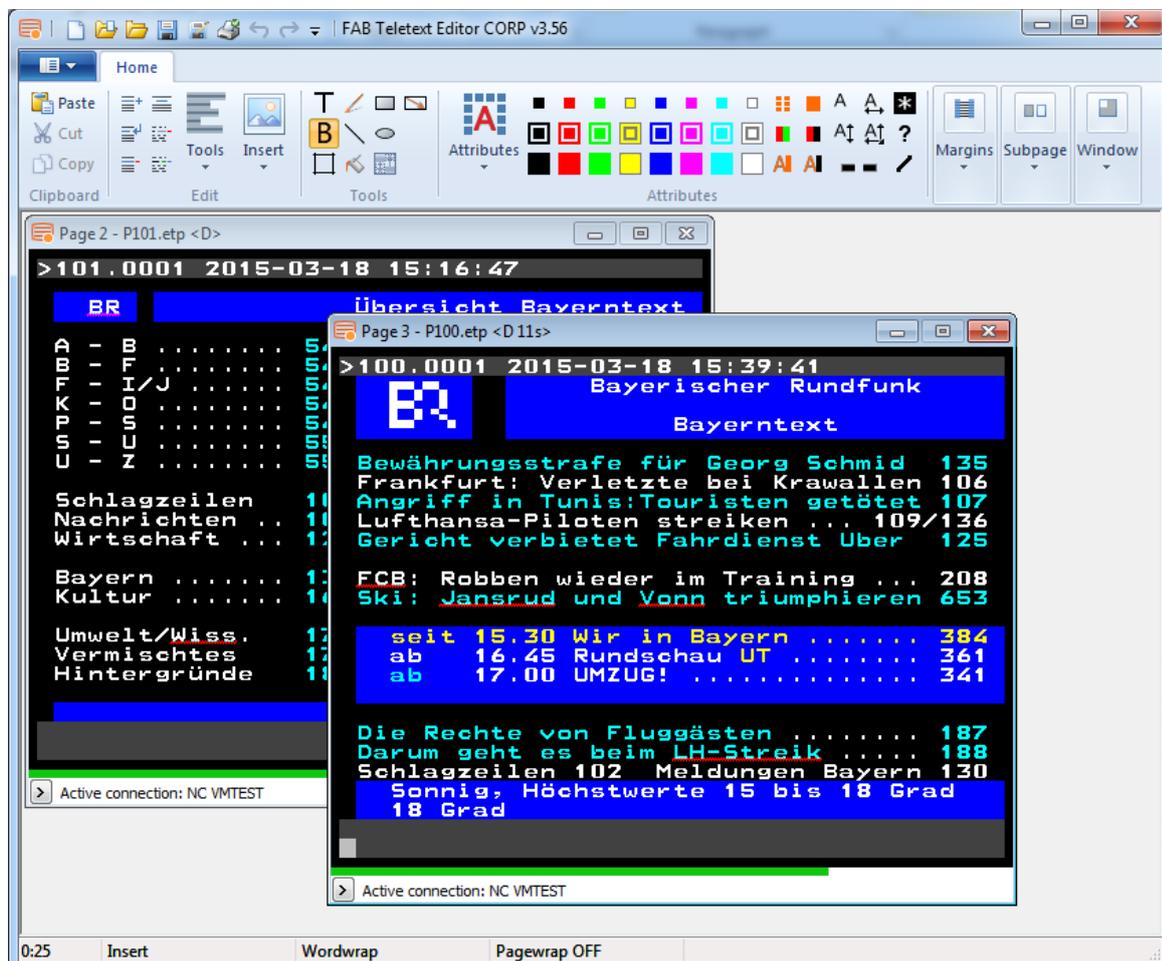


FAB TELETEXT EDITOR

FAB Teletext Editor for Windows is a Windows based program for preparation of teletext pages and transfer of teletext pages to the teletext system.

Following is a list of most important functions supported by FAB Teletext Editor:

- Supports all west, central and east European scripts including Greek and Cyrillic.
- Supports loading of numerous file formats that enables preparation of teletext pages for teletext systems of other manufacturers: *.TTP, *.EP1, *.WSP, *, *.BIN, *.PGW, *.VTX, *.TPG, *.TTI, *.DTA, *.PAG, *.VTS, and others
- Multiple windows with teletext pages can be open at the same time.
- Undo / Redo, word wrap and page wrap, select and move lines/blocks with mouse, cut, copy and paste text.
- The Windows clipboard is supported. Texts from other windows applications can be imported into a teletext page. If the text is too long it is automatically distributed to more subpages.
- Easy drawing of teletext graphics with the mouse.





FAB TELETEXT NETWORK API

FAB Teletext Network API is a programming library for Windows (32/64 Bit COM Object) with functions that allow a programmer to write a program and perform the following functions:

- Create a teletext page and optionally load a template from disk
- Write data (text/graphics) to any position on the teletext page
- Transfer the teletext page over network to FAB Teletext Data Generator / Network Controller
- Other functionalities like loading of data from any kind of source (SQL Database, HTML internet pages or other) is not part of FAB Teletext Network API and must be implemented separately in the program.
- FAB Teletext Network API is licensed per site. The buyer can install the software on any number of PCs on one site.
- The API is implemented as a COM Object under Windows and can be used with any Win32/64 programming language like Visual Basic, VBScript, C++, Delphi, Word, Perl, PHP and others. The functions are easy to use and have the following functionality:
- Load and save teletext pages in a large number of file formats.
- Support file formats for loading: *.TTP, *.EP1, *.WSP, *.OVL, *, *.BIN, *.PGW, *.VTX, *.TPG, *.TTI, *.DTA, *.PAG, *.VTS, *.TED, *.TTV, *.TT, *.FIL
- Read/write text and graphics to the teletext page.
- Communication to Teletext Data Generator and Teletext Network Controller over TCP/IP.
- The NETAPI also includes the description of the TCP/IP protocol that is used for communication to Teletext Data Generator or Teletext Network Controller.
- The following example for VBScript will show how the most important functions can be used to transfer pages to the FAB Teletext Data Generator:

```
dim MyApi
set MyApi = CreateObject ("FABNetApi.ETTW")
MyApi.WriteLine 4, 8, "{Yellow}WriteLine call from VBScript"
MyApi.WriteLine 4, 10, "{Green}Close this window to continue"
MyApi.WriteLine 11, 11, "{Green}with the script"
MyApi.Connection = "192.168.0.12"
MyApi.SendCommand ("REG username,password")
MyApi.SendCommand ("PUT 123")
```