

For most companies it is difficult to imagine life without a groupware solution. Groupware allows users to exchange contacts and appointments and handles other dynamic processes, such as out-of-office rules or temporary mailbox access, allowing you to tailor your enterprise communication to reflect your work flow.

Kolab, Kontakt, and KDE

The KDE Kontakt project originally designed groupware features that needed a Kolab server (see Box "Kontakt and Kolab History"), but it added connectors for other groupware servers at an early stage [1]. In this article we will be looking at Kontakt 1.0 and KDE PIM 3.3, both of which were current when this issue went to print. If you need to do so, you can use Kontakt as an IMAP client on your home network and manage your personal information off line. This said, Kontakt shows its true capabilities as a client in a groupware environment. You might mistake Kontakt for Outlook or Evolution at first sight. You can access the organizer, mail client, and address book via a tool bar at the side of the window. But looking under the hood reveals a completely different engine. Kontakt is simply a program framework. The Kontakt shell integrates plug-ins, wrappers for so-called KParts.

KParts are familiar applications such as KMail, Kaddressbook, and Korganizer, all of which use KDE's interprocess communication protocol DCOP [2]. It makes no difference whether you run the programs as Kontakt shell parts or as stand-alone applications. The features stay the same, and users can set things up to suit their requirements.

Together but Still Apart

When you launch Kontakt, it shows you an overview page with email messages, your next appointments and birthdays, the weather, news, and your Palm synchronization status. You can compile an individual news overview from a wide

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The KDE groupware client

First Kontakt

Kontakt 1.0 joins the growing group of Linux-based competitors to Outlook.

The Kontakt client supports a variety groupware servers, handles messages, and can even give you a weather forecast. **BY DANIEL MOLKENTIN**

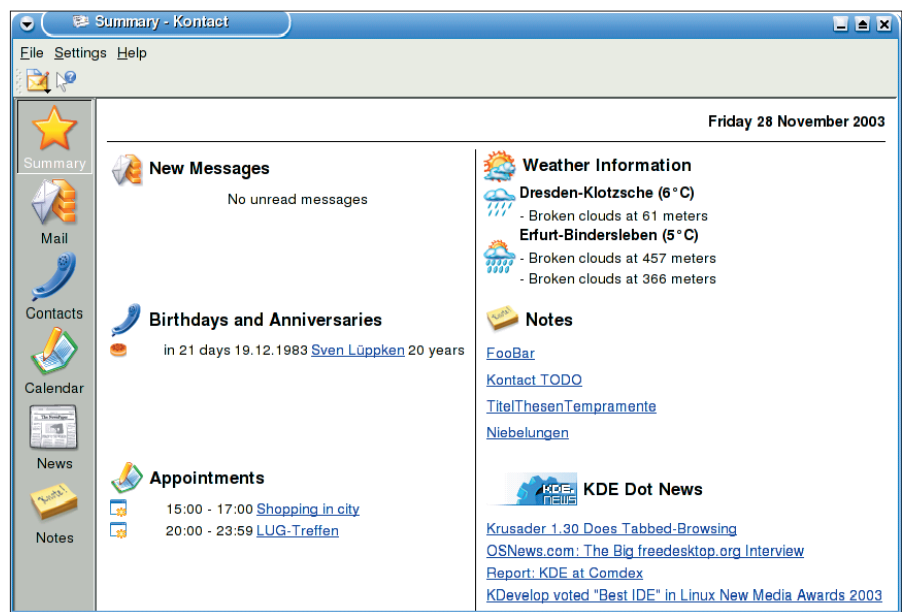


Figure 1: The Summary page provides a report from Kontakt's component applications.

range of RSS feeds (see Figure 1). The weather report is provided courtesy of the National Weather Service.

The button bar on the left is not only used to toggle between applications, but also for drag & drop operations. For example, users can drop an email message on a task button to tell Kontakt to remind them to reply to that message. And if you need to send an address book entry, just drop it on the mail icon. The menu and button bars change to reflect the current application, displaying the relevant actions for that component. The status bar displays messages from all components, no matter which one is currently active. Selecting an application that is currently running outside the Kontakt framework moves that application into the foreground.

The KMail email client (see Figure 2) is another Kontakt part. The new version 1.7 from KDE PIM 3.3 has long-awaited

features, such as incremental sender and subject line searches in the current folder and druids that integrate popular anti-spam and anti-virus products such as KMail filters. A log window helps you test complex filtering rules by monitor-

Kontakt and Kolab History

The idea was to produce an Open Source software that could integrate Outlook clients. These were the original specifications for a free groupware solution for internal use, which Germany's Bundesamt für Sicherheit in der Informationstechnik (BSI - Ministry for Information Technology Security) published about three years ago. Apart from purely Web-based systems, nothing fitted the bill back then. A consortium comprising Intevation (quality assurance and project management), Erfrakon (responsible for the server), and the QT and KDE specialists, Klarälvdalens Datakonsult (KDAB, who programmed the client) got the job.

ing the filtering process. Unfortunately, the program still does not have a graphic sieve script editor, although there is some sieve management code that is currently used for out-of-office messaging.

One of KMail's major features is its powerful crypto system, which can handle both OpenPGP and S/MIME. While OpenPGP is targeted at private users, S/MIME is designed for corporate and government environments.

Encryption for Government Agencies

KMail supports version 2 of the Teletrust Mailtrust standard for electronic signatures and encryption in government offices. The BSI Aegypten I and II projects added this functionality to the mail client [3]. Enhancements to KAddressbook also facilitate encryption.

Users can assign an OpenPGP key and an S/MIME certificate to each contact, and you can opt to have KMail automatically encrypt messages to these contacts or prompt you to confirm.

User-Defined Fields

It is quite common for corporations to need enterprise-specific address book fields. Although the *Custom Field* function can handle simple cases, you can use the *Custom Pages* to create more complex KAddressbook settings. You still need to design a page with QT Designer. KAddressbook saves the values of the GUI elements, whose names all start with *X_*, in the Designer application as *Custom Fields*. Usenet fans will be pleased to hear that Kontakt helps them out with their hobby. To do this, the program uses KNode with an added Kmail-style quick headline search (see Figure 2).

KOrganizer has redesigned day and month overviews. If there is enough space, the month overview expands to display multiple months. If you are planning appointments, a free/busy view of the personnel resources is a big help, although it does assume that other people publish their schedules. If not, KOrganizer displays a shaded area to let you know.

Flight Training

Kpilot allows you to synchronize supported applications with your Palm

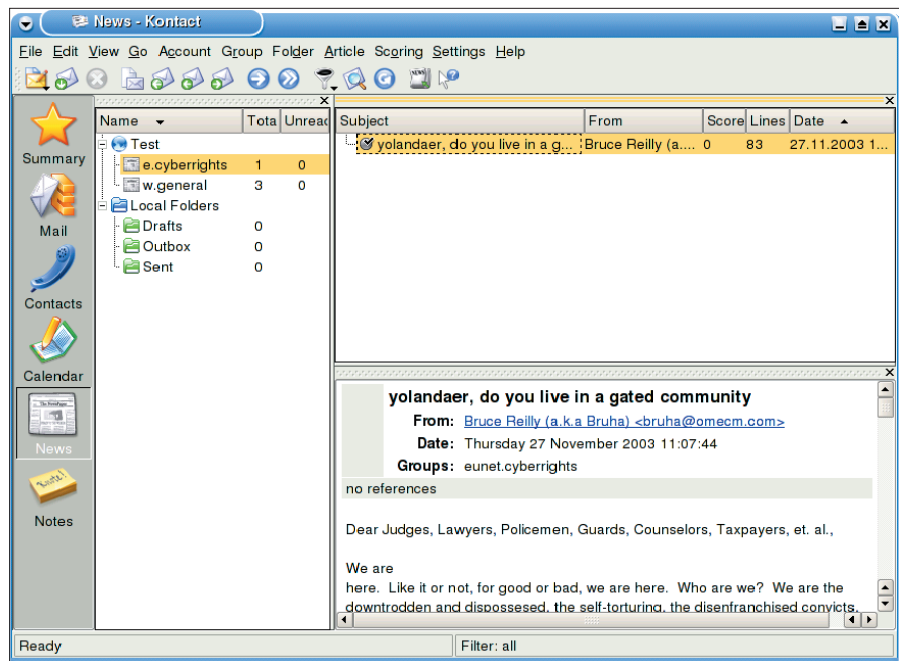


Figure 2: Configuring news in Kontakt.

OS-based handheld device [4]. Kontakt displays the current synchronization status, details on updated objects, and the last sync time. This is the first version to support the KPilot successor, Kitchen-sync, which supports a wider range of devices. At this time of writing, there is a PC-to-PC plug-in and a plug-in for synchronizing Qtopia and OPIE-based handhelds. And more plug-ins are in the pipeline, such as one for Sync ML, the standard for many current cellphones.

The Kopete Instant Messenger interacts with Kaddressbook under KDE 3.3 or newer. Besides the popular AIM, ICQ, MSN and Yahoo Messenger protocols, Kopete also supports IRC and Jabber, which are useful for enterprise server

applications. Kopete allows you to take the contact data for a person from multiple messaging systems and use that data to create a meta-contact. KDE PIM integration goes one step further. You can add Kopete meta-contacts to the address book. Once the contact is in the address book, you can use an appropriate IM service to send messages.

There is no Voice-over-IP plug-in at present. But there is a plug-in API that allows you to integrate external software with Kontakt. The Akregator blogging client uses a Kontakt plug-in for this purpose.

Despite its affinity to the Kolab project [5], the Kontakt framework works in a different way than the Kolab server. A

Using Existing Tools

The developers stuck to the Unix philosophy of using existing tools when they programmed Kolab, the groupware server, drawing on OpenLDAP, Cyrus IMAP, Postfix, and an Apache Web server with PHP for the Web-based administration front-end. Instead of storing data in a SQL database, they used IMAP folders.

The client side turned out to be more complex. KMail and KOrganizer, both of which have a widespread user base, had very little common ground. The KDE project had made some attempts to merge the programs, which had led to the Kaplan project, but work had not progressed sufficiently to use it for the BSI contract. This prompted the decision to use the Kparts technology to integrate KOrganizer and KMail, and this in turn spawned the Kolab client. The developers chose the proprietary Bynari Insight connector plug-in to support Outlook on Windows; the connector converts Outlook's MAPI to ractLDAP.

As interest in groupware solutions continued to grow, the KDE camp finally woke up, and the authors of KMail, KOrganizer, Kaddressbook, and other KDE PIM programs started work on frameworks to support interaction between their programs. After being assimilated by Kontakt, Kaplan started to make some good progress. Inspired by the component-based structure of KDevelop 3, it provides a common GUI for the existing applications.

Agreements

After completing the Kolab project, KDAB and the PIM authors soon agreed that it would make sense to stop developing the Kolab client and work on the developer version of Kontakt instead. At the end of 2003, BSI published a tender for a Kolab successor, which aimed to improve usability and user-friendliness. Kontakt became the successor to the Kolab client, and the follow-up project is due for completion at the end of 2004.

resource framework abstracts the data from the source and the transmission protocols.

Connectivity

You can use XMLRPC or WebDAV to read calendar data from an IMAP server or SQL to access a database; the programs handling the data will not notice the difference. This technology also produced the E-Groupware connector. (E-Groupware forked off from PHP Groupware a while back.) The connector uses its own XMLRPC-based protocol to communicate. SuSE has also started to integrate the same technology into its OpenExchange Server product. OpenExchange also uses WebDAV to exchange contacts and appointments, IMAP for mail handling, and LDAP to access the global address book. The E-Groupware and OpenExchange connectors are included with KDE PIM 3.3.

Kontakt Support for Exchange

Work on an Exchange connector is in progress. Just like the Novell Connector

(see the article in this issue), it mainly uses the WebDAV protocol but relies on IMAP for mail handling. The Exchange server needs to enable IMAP and Web access via the Internet Information Server to support this.

The Opengroupware project [6], a Skyrix offshoot founded in 2003, is currently planning a Kontakt connector that will either use XMLRPC or WebDAV. And the free Neuberger & Hughes Exchange4Linux [7] server, which only supports Microsoft Outlook via a proprietary connector thus far, can also look to Kontakt integration in the near future.

It is extremely simple to set up a Groupware client. A druid that prompts users for their names, passwords, and servers handles the configuration. But you should close any active PIM components before you start. There are druids for Kolab, OpenExchange, and E-Groupware so far. There are some pitfalls on the road to choosing a groupware server. Installing Kolab is quite time-consuming. The Kolab server is distributed as an OpenPKG environment that provides, and needs to build, a full set of packages, from GCC through to the daemons. You need to launch the build manually. Check out the Kolab forum at [8] for more help.

Pitfalls: Choosing a Server

There are pre-compiled OpenPKG RPMs for Debian Woody on the download page, and the Zfos project [9] has binary packages, which are simpler and quicker to install, for various operating systems. The packages also include an alternative engine by Codefusion. If you need the

original, you will need to modify the install script as described in the readme.

If you run Kolab, you must make sure you remember to disable a few native system services. As the Kolab environment sets up a directory tree below `/kolab`, you can easily confine it to a root jail.

INFO

- [1] Kontakt: <http://kontakt.kde.org>
- [2] "KDE Scripting with DCOP," by Scott Wheeler: Linux Magazine #36, p. 47 ff.
- [3] Aegypten 2 project: <http://www.gnupg.org/aegypten2>
- [4] KPilot compatibility list: http://www.slac.com/pilone/kpilot_home/hardware.html
- [5] Kolab: <http://www.kolab.org>
- [6] Opengroupware Project: <http://www.opengroupware.org>
- [7] Exchange4Linux: <http://www.billworkgroup.org/billworkgroup/home>
- [8] Kolab Forum: <http://www.eforum.de>
- [9] Kolabports: <http://www.zfos.org/>
- [10] E-Groupware: <http://www.egroupware.org>
- [11] SuSE OpenExchange: <http://www.suse.de/en/business/products/openexchange/>

Version 2.0, which is due late this year, will have a single bootstrap command.

All the hard work that goes into installing Kolab may be worthwhile in a complex scenario where high availability is needed. Although the Kolab server does not have a general purpose tool, you can use standard tools to guarantee high availability for the central data storage components, Cyrus IMAP and OpenLDAP.

There are also issues with the other groupware servers. Address book field content, which the E-Groupware server can not understand, is simply discarded, and the group planning functions do not work. The Web interface shows the server's true strength, providing far more functions than Kontakt supplies by default. Users will need their browsers to manage E-Groupware. The homepage at [10] provides a demo.

The OpenExchange licensing model is its weakest point. Whereas SuSE supports an unlimited number of email clients, the license for the proprietary, third party groupware module of OpenExchange server is quite expensive in larger environments.

Conclusion

Kontakt demonstrates that groupware is not a monoculture. Even though it does not support the full groupware server functionality, the combinations we looked at in this article are quite capable of handling the scenarios previously dominated by Exchange and Outlook. ■



Figure 3: Kontakt's Kmail client.