

**FaMAS – Facility Management System** enables research institutes to significantly improve their daily scheduling processes – saving effort, time, and money



**Managing modern research institutes and keeping track of resource utilization – be it human resources, lab equipment or meeting rooms – as well as the associated billing has become one of the key challenges in today’s science.**

Modern research institutes oftentimes have dozens to hundreds of inventory items to administer – ranging from simple computer terminals to high-throughput DNA sequencing systems. These items are utilized by large numbers of researchers belonging to a number of research groups, oftentimes requiring elaborate accounting and administration tools.

To reliably schedule the equipment and to keep up with the necessary financial reporting oftentimes puts a significant administrative burden on facility managers and administrative assistants. In some cases, despite all efforts, also unnecessary equipment underutilization or double bookings occur, hindering the research effort itself.

Making matters even more complicated, not only equipment requires scheduling but also meeting rooms, as well as support from research assistants – thus adding yet another dimension.

**Scionics Facility Management and Scheduling System provides a solution to these challenges.**

FaMAS version 1.3 includes a broad functionality to address the scheduling and related cost controlling needs in a research institute.

This includes:

- **Clear and concise scheduling overview** - equipment, room, or assistant’s schedules are displayed per week or per month
- **Personal statistics** - each user has an exact overview of his/her resource utilization and accumulated costs
- **Cost information** – internal and external prices are easily defined for each item (equipment, facility, human resources...)
- **Item description** – for each item, a description and picture can be inserted to avoid potential misunderstandings
- **Problem reporting tool** – encountered problems with equipment or other comments can be communicated within the system
- **User Management** – for each user, ...

### **FaMAS: Key Features**

- Enables fast and convenient scheduling of equipment and personnel on a day to day basis
- Allows easy set-up of pricing models per item as well as per user-group, including cancellation fees
- Provides a strong reporting functionality with overviews per item, per user, and per group
- Includes a problem reporting function, ensuring that research interruptions are minimized

### **FaMAS: What’s New in Version 1.3**

- Inclusion of cancellation fees according to timeliness of cancellation
- Option to block equipment for e.g. maintenance
- Possibility to assign “no access” rights to individual existing users to block access without deleting user
- Download of reports and statistics as tab delimited text file for export into other programs like Microsoft Excel

... administrators can specify system access levels and also store contact information

- **Definition of parameters** – for easier administration, general parameters like booking limits can be defined system-wide
- **Easy integration** – the program is easily set-up and may share the user-database with a variety of popular systems
- **Security** – the data is stored on the client’s server while industry-standard secure socket layer (SSL) protects the transfer

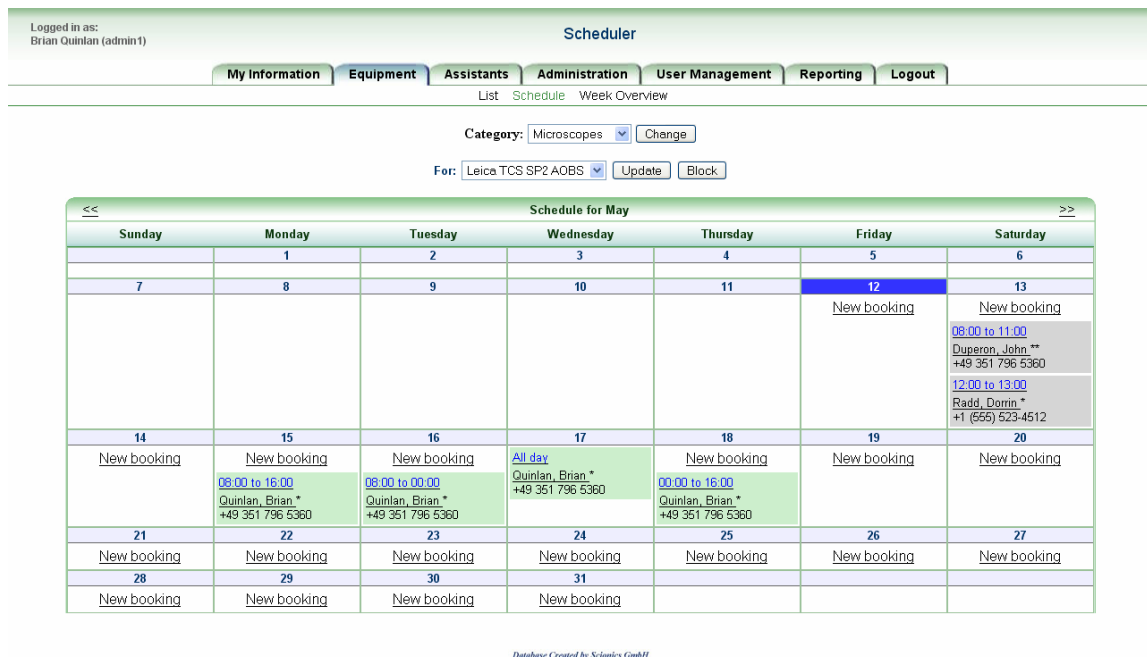
to provide all user-relevant options within a few clicks. This way, the user does not need to work through an extensive number of program layers, saving time and making the program extremely easy and fast to handle. Furthermore, this clear structure results in software-training and extensive manuals being unnecessary. Essentially, the FaMAS is as easy to understand and operate as a well-designed website.

As can be seen below, all essential information is provided on the schedule overview and no cumbersome switching back and forth between different windows is necessary. At the same time, to avoid excessively complex overviews, additional color highlights are applied, which make the entries for the specific user even easier to track. Last, filtering for specific equipment items makes this scheduling system the first choice also for large and very large institutions.

**A concise and intuitive interface is key for user-acceptance and usefulness of software.**

FaMAS has been developed in close collaboration with leading research institutes with such user-friendliness in mind.

By applying an intelligent structure we managed



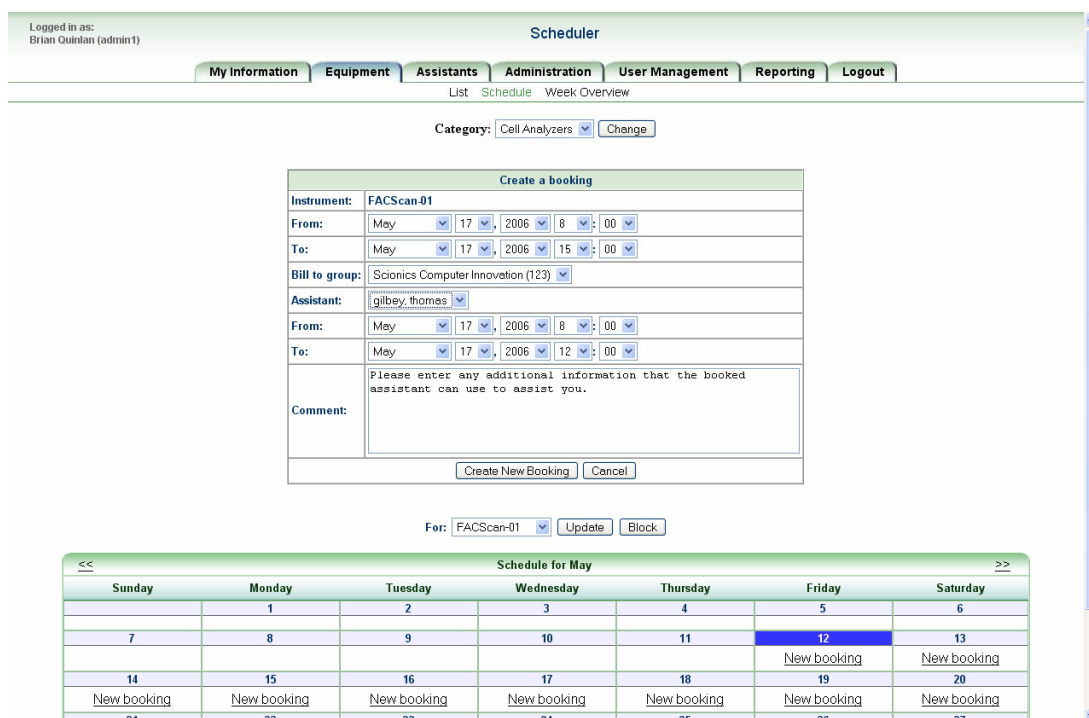
The screenshot shows the 'Scheduler' interface. At the top, it indicates the user is logged in as 'Brian Quinlan (admin1)'. Below this are navigation tabs: 'My Information', 'Equipment', 'Assistants', 'Administration', 'User Management', 'Reporting', and 'Logout'. The current view is 'List Schedule Week Overview'. A filter is set to 'Category: Microscopes' and 'For: Leica TCS SP2 AOB5'. The main part of the interface is a calendar for May, showing dates from Sunday to Saturday. The calendar contains several booking entries, including 'New booking' and specific time slots for users like 'Quinlan, Brian \*' and 'Duperon, John \*\*'. The interface is clean and organized, with clear filters and a detailed calendar view.

**Successful facility scheduling is not limited to administration of equipment availability but also needs to consider different user profiles & rights, internal costing structures for different items, and potential services like the provision of research assistants.**

FaMAS booking system therefore allows users to book assistants at the same time as the equipment. To ensure that adequate qualifications for the instruments exist, the assistant selection list at this point is dependent on the type of equipment.

As a basis for conducting billing according to group membership, user profiles have to be managed and associated with different billing groups.

For this purpose, FaMAS provides its own database or – to save data integration efforts – may directly link into previously existing user systems based on LDAP. Custom integration is also possible but would require a separate agreement. Within the user database, name and contact information for the user is commonly included and the possibility to upload a picture also exists.



The screenshot shows the 'Scheduler' interface. At the top, it indicates the user is logged in as 'Brian Quinlan (admin1)'. The main navigation bar includes 'My Information', 'Equipment', 'Assistants', 'Administration', 'User Management', 'Reporting', and 'Logout'. Below this, there are tabs for 'List', 'Schedule', and 'Week Overview'. A 'Category' dropdown is set to 'Cell Analyzers'. The central part of the interface is a 'Create a booking' form for instrument 'FACScan-01'. The form includes fields for 'From' and 'To' dates and times, 'Bill to group' (Scionics Computer Innovation (123)), and 'Assistant' (gilbey, thomas). There are also 'From' and 'To' fields for the assistant's availability. A 'Comment' field is provided for additional information. At the bottom of the form are 'Create New Booking' and 'Cancel' buttons. Below the form, there is a 'For:' dropdown set to 'FACScan-01' with 'Update' and 'Block' buttons. At the bottom, a 'Schedule for May' calendar is displayed, showing dates from Sunday to Saturday. The calendar indicates 'New booking' for several dates, including Friday the 12th and Saturday the 13th.

In addition, the user has a free text field available into which he/she may already enter information that the assistant can use to prepare the facilities.

Billing is conducted on a half-hourly basis with billing rates that are pre-defined by the administrator and that depend on the equipment as well as the status (internal vs. external) of the user. Also cancellation of bookings is easily conducted – but penalty fees for insufficient advance-notice may be activated for e.g. less than 24 hours advance notice.

Furthermore, three pre-defined access right levels can be selected that may block users from accessing the system, gives them general user rights or grants administrative access. Also, “view only” options exist, e.g. for financial accountants that access reports.

These users are then assigned to one or more billing groups to be able to conduct cost-controlling for separate projects. Based on these users, cost-structures, and billing groups, reports can be created that may be the basis for any further budgeting.

**Useful scheduling systems do not only provide elaborate time-management options for the equipment but also reporting functions to keep track of item utilization as well as to provide a basis for billing to different users and user groups.**

FaMAS comes with a strong reporting functionality that provides statistics and analysis on several levels. First of all, users have the ability to get a detailed overview about the time and services allocated to their log-in (see below). This not only provides the user with cost information per item and time-period but also increases the cost-consciousness and feeling of self-responsibility.



Instrument	From	To	Cost	Assistant	From	To	Cost
Leica TCS SP2 AOB5	07:00:00 05/15/06	15:00:00 05/15/06	320.00	None	n/a	n/a	n/a
Conference Room (1st Floor)	14:00:00 05/16/06	19:00:00 05/16/06	5.00	None	n/a	n/a	n/a
Zeiss LSM UV	10:00:00 05/17/06	15:00:00 05/17/06	100.00	None	n/a	n/a	n/a
Zeiss LSM UV	08:00:00 05/19/06	16:00:00 05/19/06	160.00	Duperon, John	08:00:00 05/19/06	14:00:00 05/19/06	60.00
<b>Instrument Totals:</b>	<b>26:00</b>	<b>585.00</b>	<b>Assistant Totals:</b>	<b>6:00</b>	<b>60.00</b>		

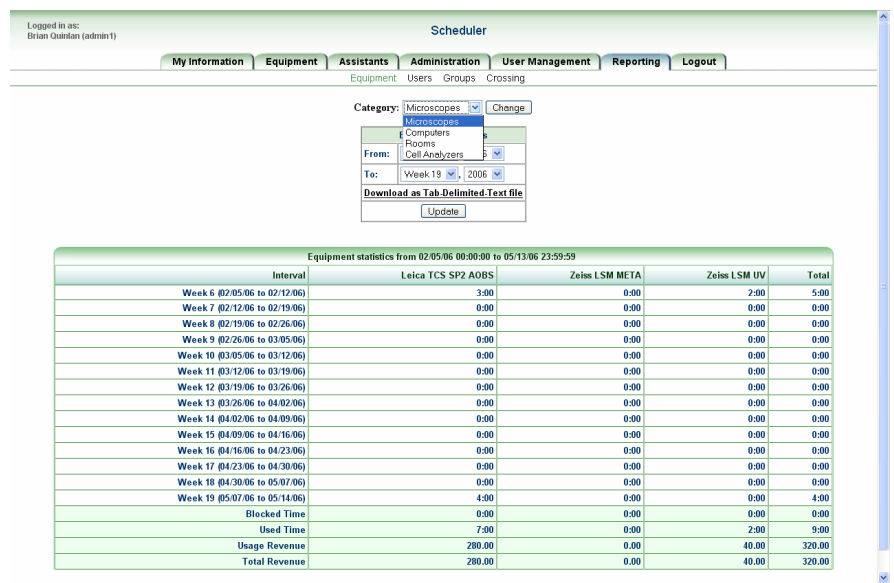
the basis for investment planning – e.g. if constant, very high utilization rates are observed then investment in additional similar instruments may be required. For invoicing, especially the summary per billing group is highly valuable.

Third, the “crossing” function displays the utilization of all users for every item in one comprehensive table. This provides the opportunity to compare usage patterns of different persons for the different instruments.

Reporting time-frames can in all cases be freely set, storing also historic data for eventual analysis. Depending on reporting billing group, item or user, the reports can be selected for daily, weekly or monthly summaries.

Once the desired information is obtained, the created reports can then easily be exported as tab-delimited text files to e.g. MS Excel for further analysis.

Second, the administrator may access statistics for each instrument, displaying used time, blocked time (e.g. for maintenance), and the resulting revenue on a weekly basis and as a total for the specified time-period (see screenshot to the right). The same kind of information may also be displayed for each user and also as totals for each billing group. This information may be used solely for statistical purposes and to keep track of budgeting, but may also be



Interval	Leica TCS SP2 AOB5	Zeiss LSM META	Zeiss LSM UV	Total
Week 6 (02/05/06 to 02/12/06)	2.00	0.00	2.00	5.00
Week 7 (02/12/06 to 02/19/06)	0.00	0.00	0.00	0.00
Week 8 (02/19/06 to 02/26/06)	0.00	0.00	0.00	0.00
Week 9 (02/26/06 to 03/05/06)	0.00	0.00	0.00	0.00
Week 10 (03/05/06 to 03/12/06)	0.00	0.00	0.00	0.00
Week 11 (03/12/06 to 03/19/06)	0.00	0.00	0.00	0.00
Week 12 (03/19/06 to 03/26/06)	0.00	0.00	0.00	0.00
Week 13 (03/26/06 to 04/02/06)	0.00	0.00	0.00	0.00
Week 14 (04/02/06 to 04/09/06)	0.00	0.00	0.00	0.00
Week 15 (04/09/06 to 04/16/06)	0.00	0.00	0.00	0.00
Week 16 (04/16/06 to 04/23/06)	0.00	0.00	0.00	0.00
Week 17 (04/23/06 to 04/30/06)	0.00	0.00	0.00	0.00
Week 18 (04/30/06 to 05/07/06)	0.00	0.00	0.00	0.00
Week 19 (05/07/06 to 05/14/06)	4.00	0.00	0.00	4.00
Blocked Time	0.00	0.00	0.00	0.00
Used Time	7.00	0.00	2.00	9.00
Usage Revenue	280.00	0.00	40.00	320.00
<b>Total Revenue</b>	<b>280.00</b>	<b>0.00</b>	<b>40.00</b>	<b>320.00</b>

**When already keeping track of instruments' scheduling status, keeping track of any problems that may have been encountered with the equipment is a logical extension of the system.**

When users encounter any less pressing problems with the equipment, it may be inconvenient and unnecessary to immediately call the facility manager or technical staff. For these instances, submitting a problem notification via the scheduling system is only one click away and progress can be easily monitored within FaMAS.

**User and financial data stored in information systems may be especially sensitive and thus require protection from unauthorized access.**

At the user management level, FaMAS provides the earlier mentioned ability to assign different access levels within the system. These levels specify the different rights required to make changes or access categories of equipment.

From a technical perspective, the program stores all data locally on the client's server. Only if the customer requests a hosted solution, will data be located on an external system. The data transfer itself is protected by the secure-socket-layer (SSL) standard, providing the same type of security as internet-banking. Password authentication can be executed through FaMAS' internal user management system or – to make password management more convenient – by LDAP or POP3/IMAP/NIS.

**Software should easily integrate into existing system and not require new hardware and software to make it run smoothly.**

To avoid such common problems, FaMAS is web-based and trouble-free to set up as it will run with all standard hardware and software. It will run on any Windows, Linux or Solaris based server that can support the Python scripting language and the MySQL Database Software. Our installation-team will need about one day to set the program up on your system and can easily do so remotely.

On the client side, FaMAS will run on any major operating system that supports the Microsoft Internet Explorer, Netscape or the Mozilla Firefox free web browser. This includes all current versions of Windows, MacOS (including OS-X), Linux, and most flavors of UNIX.

In the case where internal user management is not desired, the scheduler can be directly integrated with existing systems using LDAP. Other solutions may also be possible but would potentially require limited integration efforts, necessitating an additional service contract.

In case your institution chooses a different IT environment, compatibility needs to be assessed. Alternatively, we can also provide a hosted solution.

Please feel free to contact us anytime to clarify open points, to access our test & trial environment or to receive a quote.

Alternatively, visit us at [www.scionics.de](http://www.scionics.de) to get more information and see also the other state-of-the-art information tools and services that we developed to support the global scientific community.

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