

WASE Overview

Summary:

The Web Appointment Scheduling Engine (WASE) makes it possible to schedule appointments over the Web. Using WASE, faculty, deans, administrators and others can create web-based calendars on which they indicate their availability for appointments. Students and others can locate these calendars on the web, find an available appointment time, and schedule an appointment.

The Problem:

There are many situations where an individual wishes to publish their availability for appointments in a manner that allows other people to make appointments without directly contacting them. For example, a professor or dean or administrator may wish to let students know about his/her offices hours. An advisor may wish to let their advisees know about advising hours. An administrator may wish to let potential applicants know when they can make an appointment to discuss a job or other opportunity. In all of these scenarios, we have:

- 1) A person/place/thing that is available on specific days at specific times (or, as in the case of office hours, on a specific set of dates and times).
- 2) People who wish to make an appointment to visit/use/access this person/place/thing. These may be specific individuals (students enrolled in a course), or a specific population (anyone with a login userid), or anyone at all.
- 3) A desire to have the people making the appointments select an available date and time themselves, rather than having them arrange the appointment via email or phone conversations or scheduling exchanges.

Standard calendaring/scheduling software (e.g., Outlook, Ical) does not handle this situation well, because it has no way to allow people to specify limited availability. Standard calendaring lets you specify when you are busy, and assumes that if you are not busy, you are available for scheduling. What is needed is a system that lets you specify when you are available, and that assumes that you are busy at other times.

The Solution:

WASE is designed to handle the above-described scenario. WASE allows the person making the appointment to add the appointment to a person's calendar, but only on dates and times that the person has specifically designated for such appointments. WASE can also be used to schedule meetings where the attendees enroll themselves in the meeting (as opposed to the standard calendaring solution, which requires that people be "invited" to the meeting).

WASE includes features that allow the calendar owner to restrict who may schedule an appointment, how many appointments may be scheduled, and by when (relative to the start of the appointment time) the appointment has to be made. It also includes a facility that will add appointments made in the system to a person's local calendaring application (e.g., Exchange or Google calendar).

WASE is entirely web based, and only requires a web browser to create and manage a calendar or to make appointments. WASE also includes a facility that allows a calendar owner to designate one or more calendar "managers", people who can manage a calendar on the owner's behalf. Lastly, WASE includes a notification/reminder facility that sends out notices of pending appointments.

Who May Use the System:

There are four distinct roles that a user may have in the WASE system (any individual may take different roles at different times):

- 1) People who want to make themselves, or some place or thing they control, available for appointments. They make themselves or the place/thing they control, available for appointments by creating and managing one or more "calendars". These people are called "calendar owners", or just "owners", in WASE.
- 2) People who want to make appointments with the owners or the place/thing the owners control. These people are referred to as "appointment makers", or just "makers."
- 3) People who manage one or more calendar owner's calendars. These people are referred to as "managers."
- 4) People who make themselves (or some place/thing they control) available for appointments on someone else's calendar (e.g., a "shared" calendar). They are referred to as "calendar members", or just "members."

Anyone who can authenticate to the system (login) can be a calendar owner and can create and manage one or more calendars in the WASE system. Calendar owners are typically faculty members, deans and administrators (people who hold office hours), but students can create calendars as well (if they want to make themselves available for appointments).

Anyone who can authenticate to the system (login) can make appointments, subject to any restrictions set by the calendar owner. People who cannot authenticate to the system can login as "guests" using their email address. They will only be able to make appointments on calendars that have been specifically enabled for guest access.

Appointment makers do not need to create a calendar in the WASE system. They simply look up the calendars of owners and make appointments with them. When a calendar owner makes themselves available for appointments, they can restrict who can schedule appointments based on userid or on enrollment in a class (if the institution is running an LMS that WASE can talk to). They can also designate that

anyone (including people without userids) can schedule an appointment (useful in cases where someone wants to be available for appointments with people outside of the community), and set a variety of deadlines about when appointments can be made.

The Elements of WASE:

The WASE system consists of the following elements:

Calendars:

A logged-in user of the system can create one or more calendars. These are used to indicate the user's availability for appointments (or the availability of a place/thing that they manage). Calendars store default information about the owner, as well as one or more BLOCKS.

Blocks

Blocks are chunks of time during which the owner is available for appointments. Blocks can be one time or recurring. They can have a variety of access restrictions. They contain a possibly modified copy of the default information stored in their owning calendar, as well as one or more SLOTS.

Slots

A block can be divided into 1 or more slots. Slots are equal-duration sub-divisions of a block. They contain one or more APPOINTMENTS.

Appointments

Appointments contain contact information about the appointment maker, as well as an optional text field for indicating the "purpose" of the appointment.

How the System Works:

Calendar owners login to the system and create a calendar (they need only do this once). They then specify the dates and times on which they are available for appointments on their calendar by adding "blocks" of available time (one-time or recurring blocks). They can add such blocks at any time. The blocks can be "slotted" or "unslotted". Slotted blocks are divided into equal-duration appointment slots (people sign up for a specific slot). Unslotted blocks contain a single slot which occupies the entire block (people sign up for the block). Slotted blocks are used to schedule individual appointments. Unslotted blocks correspond to the traditional "first come, first served" model of office hours, or they can also be used to schedule meetings.

When a calendar owner adds a block of available time to their calendar, they can specify various kinds of access restrictions (who can see the block and/or make appointments). They can also set a variety of scheduling "deadlines" (e.g., by when appointments have to be made), as well as limiting how many appointments an

individual may make in the block, and whether slots can have more than one appointment.

When a calendar owner adds recurring blocks of available time (e.g., “every Tuesday from 2:30 until 5pm”) they may designate the “kinds” of days on which they are available. The University academic calendar is built-in to WASE, so it knows which days correspond to “teaching days”, “reading period”, etc. This makes it easy to set up one’s semester office hours. [This academic calendar is set up and maintained by the local WASE administrator using a supplied script].

Making Appointments :

Appointment makers login to the system and lookup a calendar owner’s calendar (by userid or name or calendar title). They are shown a list of the calendar owner’s calendars (it is possible for a calendar owner to create multiple calendars). Once they select a calendar, they are shown a list of times when the calendar owner is available. They can then select an available time and make an appointment. Email notifications are sent (if requested) to the appointment maker and the calendar owner, as well as reminders (if requested). If there is no suitable time, and the owner allows it, the user can add themselves to a waiting list.

Calendar owners and appointment makers can go into the system at any time and cancel pending appointments. Calendar owners can add and delete blocks of availability at any time (any appointments scheduled for a deleted block are automatically cancelled, with an email notification).

Calendar Managers:

WASE also allows calendar owners to designate one or more people as “managers” of their calendar. These managers might be administrative staff members who are in charge of scheduling appointments for the calendar owner. Calendars can have zero, one or multiple managers. Managers can act on the calendar owner’s behalf (add/cancel blocks, add/cancel appointments). A user can go into WASE and submit a request to manage a calendar. WASE sends email to the calendar owners notifying them of the request, and giving them the ability to accept or deny the request. Calendar owners can go into WASE and add/remove managers at any time, and act on any pending requests to manage.

Group Calendars:

WASE supports the creation of calendars which are shared by a number of people, all of whom offer a similar service. Using this capability, you could, for example, create a calendar for “tutors”. This one calendar would have one or more “members”, each of whom would post their availability for appointments into the “tutor” calendar. Students would look up the “tutor” calendar and make an appointment with any of the available tutors. The group calendar capability lets you create single calendars that coalesce the availability of multiple individuals, thereby simplifying the process whereby appointment makers can locate an available appointment slot.

Waiting Lists:

WASE supports calendar waiting lists. Calendar owners can turn these on or off, and the system administrator can enable/disable this feature for the whole system. Students on the waiting list are notified whenever new blocks of time (or appointment slots) become available.

Reports:

WASE allows owners and makers to search their appointments and export these searches into a spreadsheet.

Integrations:

WASE supports a number of integrations with external systems. It is an LTI 1.0 “producer” tool. It can directly update Google and Exchange calendars (with the user’s authorization). It supports iCal synchronization, including calendar subscriptions. It can email and text-message users with appointment information, including reminders. WASE can talk to an LDAP server to get directory information, and uses CAS, SHIB or LDAP for authentication (it can also support plain userid/password authentication). If LDAP is not accessible, WASE can process directory information passed as attributes from SHIB or CAS.

Accessing the System:

The WASE system is accessed from any web browser via a URL of the form:

<https://WASE.princeton.edu/yourinstitution>

The WASE system requires that the user have javascript and cookies enabled in their browser; if not, they receive an error message. WASE is responsive and designed to work well on mobile devices.

Once they access the system, users are given the opportunity to login (using their institutional userid and password), or to indicate that they do not have a userid (guests can use the system to schedule appointments with calendar owners who allow guests to make appointments).

Local Calendar Integration:

WASE supports two kinds of integration with local calendars (both kinds can be used simultaneously by a user) : Calendar Subscription and Calendar Synchronization.

Calendar Subscription allows a calendar owner to view their WASE calendar from their local calendar application. This facility uses the ical-based “public calendar subscription”, also referred to as “webcal”, facility and it is supported by Outlook and most other modern calendar applications. The owner “subscribes” their local calendar application to their WASE calendar using the URL displayed on the Calendar Settings page (a “webcal://” URL).

NOTE: Calendar subscription lets the owner see appointments and blocks in their local calendar application (e.g, Outlook or Google calendar, etc.), but it does not

actually import those blocks or appointments into their local calendar; thus WASE appointments and blocks do not make the owner appear to be “busy” on their local calendar. For that, you need to use Calendar Synchronization.

Calendar Synchronization imports blocks and appointments directly into a user’s local calendar, and can be used by calendar owners/members or appointment makers. There are two ways you can request calendar synchronization:

- 1) In the WASE Preferences system, set your local calendar sync preference to either Exchange, Google or iCal. In the case of Exchange, you will be given instructions on how to proceed (Note: your institution has to permit this). For Google, you will be prompted by Google for authorization. For iCal, WASE will include an iCal attachment in the email notifications it sends out when appointments are made.
- 2) The display of Appointments and Blocks in WASE includes a “sync” icon. When clicked, this icon will cause an iCal stream to be sent back to your browser, which should trigger synchronization with your local calendar application). Note: this does NOT work if you use Google as your local calendar (select Google as your local calendar sync preference instead).

Help:

WASE has a built-in, context-sensitive help system, and is intended to be self-explanatory. It also has a “What’s New” and DidYouKnow facility.