Compliance Component

DEFINITION

Name	Calendaring and Scheduling System Design
Description	This compliance component addresses best practices for State of Missouri calendaring and scheduling systems design – those applications that provide access to a collection of calendars. Calendaring and Scheduling includes activities related to the scheduling of meetings and resources, the sharing of calendar information, and maintaining to-do/task lists.
Rationale	At present within the State of Missouri enterprise, inter-agency (between agency) scheduling of meetings and sharing of calendar information may be managed by telephone or e-mail coordination between the meeting invitees or proxies, most of whom currently manage calendar information from diverse calendaring systems, paper diaries, or personal organizers. There is growing interest in an enterprise Calendaring and Scheduling system among various government branches and agencies within the State. Electronic calendaring and scheduling systems provide users the capability of maintaining meetings, appointments and to-dos in electronic form and the ability to coordinate schedules with other users and resources.
Benefits	• Increases productivity. • Improves interoperability. • Improves communication. • Improves time management.

ASSOCIATED ARCHITECTURE LEVELS

Specify the Domain Name	Application
Specify the Discipline Name	Electronic Collaboration
Specify the Technology Area Name	Calendaring and Scheduling
Specify the Product Component Name	

COMPLIANCE COMPONENT TYPE

Document the Compliance Component Type	Guideline
Component Sub-type	

COMPLIANCE DETAIL

State the Guideline, Standard or Legislation	**Calendaring and Scheduling System Design Criteria** State of Missouri Calendaring and Scheduling systems shall be based on products and procedures that meet the list of criteria detailed in the following service areas.

1. Functional Requirements

1.1. Creating a meeting event in a personal calendar

1.1.1. Must provide the ability to schedule a meeting, event or appointment with other calendar users.

1.1.2. Must provide a mechanism to include details accompanying the meeting.

1.1.3. Must provide option to set alerts/alarms/reminders (i.e., audio or visual notification).

1.1.4. Must support delegation – ability for another user (designated) to update your calendar.

1.1.5. Must be able to schedule meetings at least six years in advance.

1.1.6. Should allow for setting the priority of the meeting.

1.1.7. Should support the attachment of files to the invitation.

1.1.8. Should provide ability to forward alerts, alarms, or reminders to another device (e.g., PDA, Pager, Cell phone).

1.2. Recurring meetings

1.2.1. Must be able to schedule recurring meetings.

1.2.2. Must provide methods to define how meetings recur: daily, weekly, monthly, annually and by date-range.

1.2.3. Must be able to cancel or modify individual occurrences of a recurring meeting without the change being applied globally to all instances.

1.2.4. Must be able to cancel or modify future occurrences of a recurring meeting without the change being applied globally to historic instances.

1.2.5. Must be able to cancel or modify all occurrences of a recurring meeting at once.

1.3. Resource scheduling

1.3.1. Must have the ability to schedule resources (e.g., rooms and equipment).

1.3.2. Should be able to see when a resource is available (free time vs. not available).

1.3.3. Should have the ability to associate scheduled resources to a meeting.

1.3.4. Should be able to set attributes of a resource (e.g., room capacity, time of day, resource owner, who is authorized, or special features).

1.3.5. Should be able to select a resource based on specified attributes (e.g., room size or location).

1.3.6. Should warn or block resource scheduling based on attributes of resource (e.g., # of network connections).

1.4. Event labeling and views

1.4.1. Must support multiple viewing options based on time increments (hour, day, week, month, etc.).

1.4.2. Must support ability to define a “day” or a “week”.

1.4.3. Must support the ability to print calendar in multiple viewing options based on time increments (hour, day, week, month, etc.).

1.4.4. Should allow user to label events (user defined labels) to support filtered or categorized views.

1.4.5. Should have the ability to display Julian Date information on calendar.

1.5. Invitations – Inviting others

1.5.1. Must support delivery of invitations via e-mail.

1.5.2. Must provide delivery failure notification of an invitation.

1.5.3. Must support the sending of invitations via proxy.

1.5.4. Must support the ability for the meeting organizer to invite additional users beyond the original invitation list without re-sending to entire group.

1.5.5. Must account for time-zone adjustments when inviting others.

1.5.6. Should support distinction of required vs. optional attendance.

1.5.7. Should be able to communicate meeting priority in the invitation.

1.5.8. Should allow invitees to counter-propose an alternate meeting date/time/location.

1.5.9. Should allow invitees to specify or update an alternate meeting label.

1.6. Check Availability

1.6.1. Should have the ability to check busy/free times in another's calendar.

1.6.2. Should be able to view any conflict details (i.e., which days/times conflict) for the meeting organizer or the invitees.

1.6.3. Should have visibility, when not expressly prohibited by the calendar owner, into another user's calendar.

1.6.4. Should integrate with a distribution list for viewing and scheduling.

1.6.5. Should be able to browse for best fit over a specified range of days.

1.7. Track Status

1.7.1. Must allow invitees to be able to respond with accept, decline, or tentative.

1.7.2. Must allow meeting organizer to receive responses from invitees: accept, decline, tentative.

1.7.3. Must allow invitees to change response later.

1.7.4. Must have the ability to decline a single occurrence of a recurring meeting.

1.7.5. Must support proxy assignment allowing another user to accept an invitation on your behalf.

1.7.6. Must be able to delegate the invitation to another user.

1.7.7. Should send notification to meeting organizer when an invitation has been delegated to another user.

1.7.8. Should be able to set the mode of notification when an invitee has accepted (e.g., e-mail notification of acceptance or an updated calendar entry).

1.7.9. Should support the ability to decline with options (e.g., decline invitation but include on future correspondence).

1.7.10. Should support the ability to send subsequent meeting information via e-mail.

1.7.11. Should be able to view current status of all invitees.

1.7.12. Should allow invitees to send comments with response.

1.8. Searching and Browsing Events

1.8.1. Must support the ability to search events by date or date range.

1.8.2. Should support the ability to perform full-text search of calendar events.

1.8.3. Should support the ability to categorize events.

1.9. To-Do/Task Lists

1.9.1. Should support a to-do list component as part of the calendar system.

1.9.2. Should support the ability to print a to-do list.

1.9.3. Should support the assignment of user-defined “categories” and permit the user to filter to-dos by category.

1.9.4. Should support a “percent complete” property or other means of signifying completion status beyond a “yes/no” or “completed/not-completed” property.

1.9.5. Should support the ability to assign tasks/to-dos to other calendar users.

1.9.6. Should support the ability to reassign tasks/to-dos to other calendar users.

1.9.7. Should support file attachments to to-dos/tasks.

1.9.8. Should support a “Priority” property for to-dos/tasks.

1.9.9. Should support the display of to-do items on the appropriate date in the user’s calendar.

1.9.10. Should support alarms for to-do reminders and provide past due notification.

1.10. Other functional requirements

1.10.1. Should provide calendar synchronization services to handheld devices including PDAs.

1.10.2. Should allow users to access calendar, schedule and to-do list information via a web front-end.

1.10.3. Should support the ability to document diary, journal and work record information.

1.10.4. Should have the ability to archive calendar information.

1.10.5. Should provide calendar replication for off-line use.

2. Technical requirements

2.1. Interoperability

2.1.1. Must support the SMTP protocol for meeting related messages.

2.1.2. Must support calendar server to client connection via TCP/IP.

2.1.3. Must be able to export data sets from calendar store.

2.1.4. Must support open standards affecting calendaring and scheduling as defined by the Internet Engineering Task Force (IETF) including:

- iCAL (RFC 2446) – Internet Calendaring and Scheduling Core Object Specification
- iTIP (RFC 2447)– iCalendar Transport-Independent Interoperability Protocol
- iMIP (RFC 2448)– iCalendar Message-based Interoperability Protocol
- iRIP (Draft v3) – iCalendar Real-time Interoperability Protocol.

2.1.5. Should support XML import/export of calendar store data.

2.1.6. Should provide an Application Programming Interface (API) which minimally provides the ability to modify users of the calendar system (add, change, inactivate, delete) and the ability to add/modify calendar objects (events, meetings, etc.).

2.2. Administration

2.2.1. Must provide mechanisms for adding, changing, inactivating and deleting users.

2.2.2. Should support single user ID for e-mail and calendaring.

2.2.3. Should be able to provide disk space utilization reports for calendar storage.

2.3. Security and Privacy

2.3.1. Must not use clear text passwords in logon sequences.

2.3.2. Must support SSL connections for web clients.

2.3.3. Should support encryption between calendar client and server.

2.3.4. Should support the use of LDAP for sign-on.

2.4. Other Technical Requirements

2.4.1. Must not require the use of cookies for web-client access.

2.4.2. Must support LDAP to communicate with an external directory.

2.4.3. Should conform to minimum iCalendar standards for to-do/task lists: title (or description), due date, and completed status (yes/no).

Document Source Reference #	

Compliance Sources

Name		*Website*	
Contact Information			
Name		*Website*	
Contact Information			

KEYWORDS

List Keywords	Group events, resource sharing, resource management, task management, meeting, materials, notification, RSVP, to-do list, task list, coordination, organizer, invitation, availability, planning, LDAP, SSL, SMTP, communication, invite, busy, free, appointment, iCAL, iMIP, iTIP, iRIP, recurrence, visibility, invitee, diary, journal, accept, decline, tentative

COMPONENT CLASSIFICATION

Provide the Classification	☐ *Emerging*	☒ *Current*	☐ *Twilight*	☐ *Sunset*
Sunset Date				

COMPONENT SUB-CLASSIFICATION

Sub-Classification	**Date**	**Additional Sub-Classification Information**
☐ *Technology Watch*		
☐ *Variance*		
☐ *Conditional Use*		

Rationale for Component Classification

Document the Rationale for Component Classification	

Migration Strategy

Document the Migration Strategy	

Impact Position Statement

Document the Position Statement on Impact	

CURRENT STATUS

Provide the Current Status	☐ *In Development*	☒ *Under Review*	☐ *Approved*	☐ *Rejected*

AUDIT TRAIL

Creation Date	7/23/2003	*Date Approved / Rejected*	
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	
Reason for Update			