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# Agenda

**Standards – what are they**

**Standards Organizations**

**The IETF**

**Examples of Calendaring Needs**

**Calendar Standards**

**Where Next?**

# What are Standards?

- Common Protocols, languages and terminology
  - Who speaks first, and how, and when.
  - Descriptions and definitions that all parties agree to use.
  - Common definition of data
  - This is a name, this is an address, this is a date, this is a time zone, etc.
  - A Way to make things work together
- What do software standards try to solve?
  - Interoperability, portability, data exchange

Here are some common standards you may (or may not) recognize:

TCP	ASCII	BMP
RJ11	Analog	LDAP
AM/FM	PCMCIA	MIME
HDTV	VHS	POP
220V	MPEG	SMTP
120V	GIF	IMAP

# How Standards Affect You

## Three phase rules supreme

- In almost all areas, power is generated and distributed as a three phase supply. Only the voltage, frequency, and end presentation differ. Further than that, the world breaks down into two camps, which are basically:

Single phase voltage	Three phase voltage	Examples where used
115V	208V	USA, Canada, Hawaii
230V	415V	Europe, Australia, New Zealand

- This means when you travel overseas or vice versa, you need to carry adaptors to manage voltage and end presentation (the plugs). It's the same with calendar products today. Just replace interfaces and underlying code with voltage and end presentation. In many cases, you can't even get them to talk together.

# Some Key Standards Bodies

## International Electromechanical Commission (IEC)

- ◆ Responsible for electrical, electronic and related Technologies

## International Organization for Standardization (ISO)

- ◆ Responsible for all standards other than those covered by the IEC

## Institute of Electrical and Electronics Engineers (IEEE)

- ◆ Not a standards group - strong role in technical standards setting, and often works with the formal standards organizations

## American National Standards Institute (ANSI)

## Internet Standards Groups

# Internet Governing Bodies

- The Internet Society (ISOC)
  - ◆ concerned with growth and evolution of the worldwide Internet, the way in which the Internet is and can be used, and with the social, political, and technical issues which arise as a result. The ISOC Trustees are responsible for approving appointments to the IAB from among the nominees submitted by the IETF nominating committee.
  
- The IAB
  - ◆ a technical advisory group of the ISOC. It is chartered to provide oversight of the architecture of the Internet and its protocols, and to serve, in the context of the Internet standards process, as a body to which the decisions of the IESG may be appealed. The IAB is responsible for approving appointments to the IESG from among the nominees submitted by the IETF nominations committee.
  
- The IESG
  - ◆ is responsible for technical management of IETF activities and the Internet standards process. As part of the ISOC, it administers the process according to the rules and procedures which have been ratified by the ISOC Trustees. The IESG is directly responsible for the actions associated with entry into and movement along the Internet "standards track," including final approval of specifications as Internet Standards.
  
- The Internet Engineering Task Force

# The IETF

- The IETF has evolved to provide technical guidance and standards development for the good of the Internet user community.
- It is a unique and dynamic structure for the solving of technical problems. Anyone can belong and proprietary interests are not entertained as solutions. All standards are made freely available and working code is the key to success.
  - ◆ Develops and maintains some commonly used Internet standards.
  - ◆ Proposals are discussed as Internet-Drafts in committees.
  - ◆ Working implementations are usually provided.
  - ◆ After Internet-Drafts are refined and rough consensus achieved, they may be published as Requests for Comments (RFCs).
  - ◆ RFCs may become a proposed standard or may be published as informational documents, best current practices guidelines, or experimental standards

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# Now Let's Talk Calendars

- Defining standards for calendars is complicated because Calendaring and Scheduling is complicated.
- It's not as simple as defining an email envelope, addressing it, storing it in post office and then mailing it, sending back a reply.
- Calendars involve time and time zones, recurring events, alarms, people, resources, events, searching times and resources on more in more than one place, blocking out time, suggesting time slots, and many, many more complexities that dwarf what email standards had to accommodate.
- The following slides will attempt to show just a few examples of calendaring and scheduling needs.

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# Calendar Examples – Part 1

a] A doctor wishes to keep track of all his appointments.

**Need:** Read and manipulate one's own calendar with only one CUA.

b] A busy musician wants to maintain her schedule on an internet-based agenda which she can access from anywhere.

**Need:** Read and manipulate one's own calendar.

c) A software development team wants to share agenda information using a group scheduling tool to more effectively schedule their time.

**Need:** Share calendar information using the same calendar service.

d] A teacher wants his students to be able to book time slot during his office hours.

**Need:** Schedule calendar events and todos using the same calendar service.

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## Calendar Examples – Part 2

e] A movie theatre wants to publish its schedule so that prospective customers can easily access it.

**Need:** Share calendar information using other calendar services, possibly from different vendors.

f] A social club wants to be able to organize events more effectively by booking time with its members.

**Need:** Schedule calendar events and todos using other calendar services, possibly from different vendors.

g) A corporation merges with another organization. Both have different calendar and scheduling systems but the organization does not have time to “merge” the two systems.

**Need:** The ability to interoperate between two calendar systems

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# OK, Now What?

- In the previous examples, the first four calendar needs can be satisfied through proprietary solutions, but the last three cannot.
- From these needs we can establish that protocols are required for accessing information in a calendar store (where calendar data resides), and for scheduling events and todos.
- In addition these protocols require a data format for representing calendar information.
- Now it's time to talk about calendaring standards.

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# Calendar Standards and Drafts Today

- Internet Calendaring and Scheduling Core Object Specification (iCalendar) – RFC2445
- iCalendar Transport-Independent Interoperability Protocol (iTIP) – RFC2446
- iCalendar Message-Based Interoperability Protocol (iMIP) – RFC2447
- CALDAV

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# iCalendar

- iCalendar (iCAL) is the Language to be used in calendar events or, in other words, it's how you describe the data in your calendar
- It provides data format for representing calendar information which the other protocols can use. iCAL can also be used in other contexts such as a drag and drop format or an export/import format.
- All the other protocols depend on ICAL, so all elements of a standards-based calendaring and scheduling systems will have to interpret ICAL. It will be the heart of all calendaring efforts.

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# iTIP

- iTIP is the scheduling protocol
- iTIP describes the messages used to schedule calendar events. These messages are represented in iCalendar, and have semantics (terminology) that include such things as being an invitation to a meeting, an acceptance of an invitation or the assignation of a task.
- iTIP messages are used in the scheduling work flow, where users exchange messages in order to organize things such as events and todos. CUAAs generate and interpret iTIP messages at the direction of the calendar user.
- With iTIP one can create, modify, delete, reply to, counter, and decline counters to, the various iCalendar components. Furthermore, one can also request the freebusy (open or busy) time of other people.

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# iMIP

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## ■ iMIP

- ◆ tells how to attach or bind calendar objects to email.
- ◆ It uses the iTIP protocol to define the calendar objects and MIME to transport the mail.

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# CALDAV

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- CalDAV is a proposal for a standard protocol to enable calendar access via WebDAV.
- The architecture of CalDAV is to model events, which may be meetings or appointments or blocked-off-time, as HTTP resources.
  - ◆ Each event is expressed in the standard iCalendar format.
  - ◆ Any Web browser can download a standard representation of an event.
  - ◆ Events are organized into WebDAV collections to allow browsing and synchronization.
  - ◆ CALDAV servers will parse iCalendar files and support a number of calendaring-specific operations such as doing free-busy time reports and expansion of recurring events.
  - ◆ With this functionality, a user may synchronize his or her own calendar to a CalDAV server, and share it among multiple devices or with other users.
  - ◆ The protocol also supports non-personal calendars, such as calendars for sites or organizations

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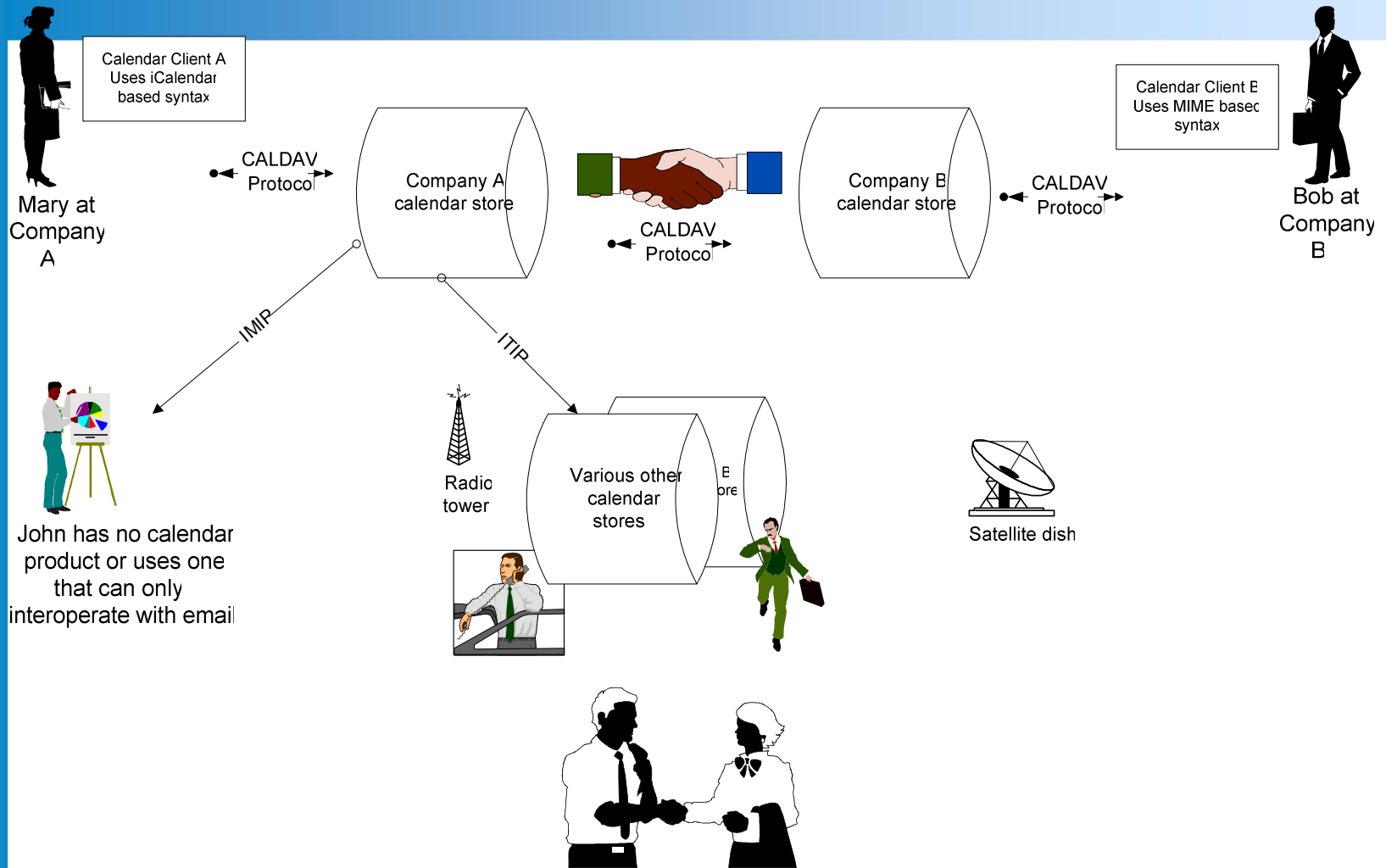
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# Comparing Calendar to Email Standards

- RFC822 is the master rule book for describing an email object.
- RFC822 in email = iCAL in Calendaring
- POP or Post Office Protocol is the standard that describes repositories for storage and further transmission of email objects.
- POP/IMAP in email = CALDAV in calendaring
- iMIP uses RFC822 since iMIP defines how to send a calendar object
- RFC822 is a wrapper for email = iTIP is a wrapper for calendaring objects

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Mary and Bob want to set up a meeting Each one uses a different calendar product They also want to invite other groups that may use different types of calendar products or no calendar product at all Mary initiates the process

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# Who Needs Calendar Standards?

- ✓ Anyone wanting to share their calendar with others
- ✓ Anyone wanting to schedule meetings within and without their organization
- ✓ Anyone wanting to schedule having an appliance repaired or getting milk delivered every Monday
- ✓ Anyone wanting to schedule Just in Time delivery of parts
- ✓ Anyone wanting to have calendar entries and alarms sent to their phone and handheld devices
- ✓ Anyone who wants to stay on time.
- ✓ **EVERYONE!**