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**SkiCal - an extension of iCalendar
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Abstract

This Memo defines the SkiCal format.

SkiCal is a machine-readable format for the interchange of enhanced yellow-page directory listings. SkiCal expands the traditional property-set of name, address, telephone number and business category, adding structured information about people, places, things, activities and the conditions and terms for interaction with resources. SkiCal provides a structure for information about dates

and times, directions, rules and recommendations for participation, pricing and reservation schemes, access information for those with special needs, ownership and responsibilities and promotional material. The referents of these listings, which are both events and persistent resources are referred to in this draft as SkiSources.

SkiCal is based on and extends the iCalendar format as defined by [RFC-2445](#), Internet Calendaring and Scheduling Core Object Specification [3] (iCalendar). SkiCal objects are comprised of either VEVENT components with the addition of new properties and property parameters, or the SkiCal specific VOPTIME calendar component described in this memo.

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1. Introduction

SkiCal adapts the iCalendar usage domain of appointments and business meetings to the needs of producers, brokers and end-users of resources and services in commerce, tourism, sport, recreation, health-care, culture, education etc. SkiCal users are both "TimeSpenders" seeking information about available resources (SkiSources) and "Publishers" wishing to make that information public.

Machine-readable directory information serves several purposes;

1. The organization of object properties into structures convenient for rapid, efficient storage and retrieval.
2. The exchange of compatible objects of information across divergent platforms
3. The facilitation of automatically generated lay-out for print, screen and audio representations.
4. The facilitation of automatic translation.
5. The wide-scale discovery and harvesting of information via the Internet with previously unobtainable accuracy.

2. Reading Instructions and Conventions

This document is intended to be read alongside [RFC-2445](#) [3]. The same basic grammar and formatting conventions that apply to iCal, also apply to SkiCal. For the sake of brevity, the syntax and clarifications of the data-types, properties and property parameters of [RFC-2445](#) will not be repeated here.

The notation used in this memo is the ABNF notation of [RFC-2234](#) [6]. Readers intending on implementing the format defined in this memo should be familiar with this notation in order to properly interpret the specifications. Also, they **MUST** be familiar with the iCalendar core object specification ([RFC-2445](#) [3]).

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC-2119](#) [2].

2.1 SkiCal Terminology

The following terms are used in this memo:

2.1.1 SkiCal

The Term "SkiCal" refers to the methodology described in this note. Though originally "S K I" reflected the Scandinavian origins of this effort, serving as an acronym for "Svenska Kalender Initiativet" (Swedish Calendar Initiative), this interpretation of the SKI acronym was changed in September 2000 so that "S K I" now stands for the "Structured Knowledge Initiative". There is no relationship to the winter sport "skiing", though of course Skiing events could be described using SkiCal.

2.1.2 SkiSource

The term "SkiSource" is used to denote a resource existing in time and space. A SkiSource could be a restaurant, a clothing store, a theatre or individual performance at the theatre, a public drinking fountain, a hospital emergency ward, a service station, a radio program, a webcast, or any other similar resource. Today such resources are listed in various directories, such as telephone catalogs, the entertainment section of newspapers, television and radio program guides, Internet guides, tourist brochures, the academic schedules of schools, or a community's listing of public services.

2.1.3 SkiCal object

The term "SkiCal object" is used in this memo to denote the calendar object description of a SkiSource using the mime-directory format described in [RFC2445](#) as follows; "The format for the iCalendar object is based on the syntax of the [RFC 2425](#) content type. While the iCalendar object is not a profile of the [RFC 2425](#) content type, it does reuse a number of the elements from the [RFC 2425](#) specification."

2.1.4 Publisher

The term "Publisher" is used in this memo to denote the publisher(s) of SkiCal objects. Publishers could be the owners or producers of a SkiSource. Publishers could be infomediaries making public the existence of a SkiSource.

2.1.5 List

The term "list" is used to denote a pre-published enumeration or taxonomy of value-terms. It is RECOMMENDED that publishers use terms from such lists as the values of TEXT type properties in order to facilitate the machine readability of their information. A method for referring to such a list is described in this memo.

2.1.6 TimeSpender

The term "TimeSpender" is used in this memo to denote the end consumer or beneficiary of SkiCal information. SkiCal is structured from the view point of the TimeSpender. A typical SkiCal object contains the answers to the most likely questions a TimeSpender might ask in order to interact (or make decisions about interacting) with a SkiSource.

2.1.7 The 'Wha' Interrogatives

The new properties introduced in this memo, as well as the original properties of [RFC2445](#), are herein sorted by their function as the answers to 6 categories of queries.

2.1.7.1 WHAT

The WHAT property is the place holder for the answers to questions such as: What is it? What is happening? What is there? What is it called? What people, things and concepts will be involved?

2.1.7.2 WHEN

The WHEN property is the place holder for the answers to questions

such as: When will it happen? When is it open? When can I go there?

2.1.7.3 WHERE

The WHERE property is the place holder for the answers to questions such as: Where will it happen? Where is it located?

2.1.7.4 WHOW

The WHOW property is the place holder for the answers to questions such as: How can I attend? How can I join? How can I buy? The word "how" is intentionally misspelled to indicate relationship to the other interrogatives, all beginning with "WH".

2.1.7.5 WHY

The WHY property is the place holder for the answers to questions such as: Why is this happening? Why is this of interest or value to me?

2.1.7.6 WHO

The WHO property is the place holder for the answers to questions such as: Who is the owner? Who is the producer? Who is Responsible? Who do I sue?

3. SkiCal specific Property Parameters

The following SkiCal property parameters are in addition to those defined by [RFC-2445 Section 4.2](#) [3] and may be used as specified for the individual properties of this memo.

```
skicalparameters =

    / item          ; specifies a specific aspect or resource
                    ; as the subject of a property
    / nsref         ; points to a NAMESPACE property declaration
                    ; containing the URI of a list of values

    / opref         ; points to an OPTIMESSET qualifying
                    ; the subject of a property

    / skirole       ; qualifies the role of the subject
                    ; of a property
```

The following table shows the possible use of SkiCal property parameters with SkiCal properties.

	item	nsref	opref	skirole
access	--opt-----	opt-----	opt-----	-----
actions	--opt-----	opt-----	opt-----	-----
bookings	--opt-----	opt-----	opt-----	-----
control	--opt-----	opt-----	opt-----	opt----
directions	--opt-----	opt-----	opt-----	-----
optimes	--opt-----	opt-----	-----	-----
namespace	--opt-----	opt-----	-----	-----
orientation	--opt-----	opt-----	opt-----	-----
partrel	--opt-----	opt-----	opt-----	-----
paymethod	--opt-----	opt-----	opt-----	-----
persons	--opt-----	opt-----	opt-----	opt----
placename	--opt-----	opt-----	opt-----	-----
price	--opt-----	opt-----	opt-----	-----
prohibited	--opt-----	opt-----	opt-----	-----
promo	--opt-----	opt-----	opt-----	-----
publisher	--opt-----	opt-----	opt-----	opt----
recommended	--opt-----	opt-----	opt-----	-----
required	--opt-----	opt-----	opt-----	-----


```

skicalver      -----opt-----
skilang        --opt-----opt-----
skuid          -----opt-----
things         --opt-----opt-----opt-----opt----
thinks         --opt-----opt-----opt-----opt----
title          --opt-----opt-----opt-----opt-----
whurl          -----opt-----opt-----opt-----

```

use of parameters

[3.1 Item](#)

Parameter Name: ITEM

Purpose: To specify the name of a specific auxiliary element or part of a SkiSource.

Format Definition: The property parameter is defined by the following notation:

```

itemparam  = (
              ( "ITEM" "=" ) / ( "PRXITEM" "=" prefix ":" ) text
            )

prefix     = 1*( ) ; one or more characters xxx matching the declared
              prefix of a NAMESPACE property value

```

Description: This parameter identifies particular aspects or parts of a SkiSource when it is desirable to make information about such aspects or parts known.

Example:

```

BOOKINGS;PRXITEM="SR:Reptile Room":only outside the Reptile Room!
RECOMMENDED;ITEM="The evening tours":Warm sweater or Jacket
PROHIBITED;ITEM="During the magic show":Flash cameras
BOOKINGS;PRXITEM="K:New Years Eve Dinner";OPREF=NYD:
1-800-256 2222.

```

[3.2 Namespace Reference](#)

Parameter Name: NSREF

Purpose: To point to a namespace declaration within the same SkiCal

object

Format Definition: The property parameter is defined by the following notation:

```
nsrefparam = NSREF "=" prefix  
  
prefix      = 1*( ) ; one or more letters matching the declared  
                ; prefix of a NAMESPACE property value
```

Description: This parameter specifies a prefix that matches a prefix declared as a NAMESPACE property parameter value. The NSREF parameter provides a method for relating the value of the property on which it is used to the appropriate namespace.

It is expected that publishers wishing to optimize interoperability will choose values from enumerated lists of value-terms. These lists can be utilized for constraining the values of both properties and property parameters. The declaration for the URI of such a list is accomplished using the NAMESPACE property. The NAMESPACE property can also assign a shorthand prefix to the URI value of the NAMESPACE and this prefix can be referenced using the NSREF property parameter.

Example:

```
RESOURCES;NSREF="QLL":HL984 projector  
PERSONS;NSREF="WW":Bill Clinton  
PERSONS;SKIROLE="orchester-member";NSREF="WW":Bill Clinton  
PERSONS;PRXSKIROLE="OM:orchester-member";NSREF="WW":Bill Clinton  
REQUIRED;NSREF="TNT":NASCT Certificate  
CATEGORIES;NSREF="SSV";LANG=se:Vuxen Utbildning - Biometrics II
```

3.3 OPTIMESET reference

Parameter Name: OPREF

Purpose: To point to an OPTIMESET declaration.

Format Definition: The property parameter is defined by the following notation:

```
oprefparam = OPREF "=" id  
  
id          = 1*( ) ; one or more characters matching the declared  
                ; id of an OPTIMESET property value
```

Description: This parameter specifies an ID that matches an OPTIMESET

ID as declared in the OPTIMES property. This parameter provides a method for relating the value of the property within which it is used to the appropriate OPTIMESSET.

Example:

```
RESOURCES;OPREF="HRTS14":Flight controller on duty
PERSONS;OPREF="BHCC":Patrik Jonasson

PERSONS;SKIROLE="Supervisor";OPREF="J7":James Payne
PERSONS;PRXSKIROLE="OM:MC";OPREF="DCD55":Wycliff Jean
REQUIRED;OPREF="L09":Resident parking permit.
CATEGORIES;OPREF="SSV";LANG=se:Vuxen Utbildning - Biometrics II
```

3.4 SKiROLE

Parameter Name: SKiROLE

Purpose: To clarify the role of Property values in a SkiCal object.

The use of the ROLE Property Parameter as defined in [RFC-2445](#) [3] [Section 4.2.16](#) Participation Role is constrained to specific component properties and specific default values. To avoid incompatibility, SkiCal defines a new property parameter - SKiROLE.

Format Definition: The property parameter is defined by the following notation:


```

Skiroleparam = (
    (( "SKIROLE" "=" ) /
      ( "PRXSKIROLE" "=" prefix ":" ))
    DQUOTE text DQUOTE )

; It is RECOMMENDED that the text value be
; chosen from a list, as described
; in this memo. Some examples of such lists are
; given here:

; as used with the PERSONS property

sampleskirolelist1 = ( "PERFORMER"      /      "HOST"          /
                       "COMPOSER"       /      "CONDUCTOR"     /
                       "SALES MANAGER"   /      "SPECIALIST"    /
                       "EDITOR"          /      "PRODUCER"      /
                       "GUIDE"           /      "SPEAKER"       /
                       "CHAIR"            /      "PRESENT"       /
                       "REFERENCED"      /      "INVITED"       )

; as used with the THINGS property

sampleskirolelist2 = ( "PRESENT"         /      "EXHIBITED"     /
                       "FOR-SALE"        /      "FOR-AUCTION"   /
                       "FOR-HIRE"        /      "APPRAISED"     /
                       "PREMIERED"       /      "DEMONSTRATED"  )

; as used with the THINKS property

sampleskirolelist3 = ( "STUDIED"         /      "REFERENCED"   /
                       "SUPPORTED"       /      "DEBATED"      /
                       "CRITICIZED"      )

)

```

Description: The SKIROLE property parameter declares or clarifies the role of Persons, Organizations, Things, or Thinks declared as the value for the Component Property

Example:

PERSONS;PRXSKIROLE="IPPL:PERFORMER";NSREF="IP":Marilyn Manson
PERSONS;PRXSKIROLE="UMLC:COMPOSER":Ludwig van Beethoven
PERSONS;SKIROLE="HOTEL MANAGER":Sylvia Barlot
PERSONS;SKIROLE="MASTER OF CEREMONIES";NSREF="IP":Creed Bradshaw
PERSONS;PRXSKIROLE="MG:HEAD CHEF":Henri Vialach

THINGS;SKIROLE="ON-EXHIBITION":Car models of 2001
THINGS;PRXSKIROLE="BBB:FOR-SALE":Levis jeans
THINGS;SKIROLE="FOR-HIRE":Golf clubs
THINGS;SKIROLE="FOR-SALE":Car models of 2001
THINGS;SKIROLE="DEMONSTRATED":Electrolux refrigerator door computers
THINGS;SKIROLE="FOR-AUCTION":Tiger Woods' golf caps

THINKS;PRXSKIROLE="ACC:STUDIED";NSREF="L":Impressionism
THINKS;SKIROLE="CELEBRATED":Joining the EMU
THINKS;SKIROLE="DEBATED":Monarchy
THINKS;SKIROLE="SUPPORTED";NSREF="L":Children's rights
THINKS;PRXSKIROLE="ABC:REFERENCED":Our plan for the next Millennium
THINKS;SKIROLE="FEATURED":The Ontologies of Cyberspace

4. SkiCal Specific Property Value Data Types

The following SkiCal property value datatypes are in addition to those defined by [RFC-2445 Section 4.2 \[3\]](#) and may be used as specified for the individual properties of this memo.

4.1 The OpeningTimes Set

An iCalendar VEVENT component can only describe one complete date-time set and its eventual recurrences, such as office meetings or lunch appointments. Using the SkiCal OPTIMESET of datetime values; OPTERM, OPSEASONS, OPDAYS, OPHOURS and OPMINUTES and OPSECONDS, individual SkiCal properties MAY be qualified with date and time values.

For example, through the use of the OPTIMESET a publisher could within one calendar object describe not only the general date-times of a conference, but also when a refreshment bar was open, the telephone times for a help desk, the last date for submitting papers, and the opening times of the conference hall itself.

Or in another example, through the use of this OPTIMESET a publisher could within one calendar object describe the operating times of a petrol station, differentiating between levels of service such as when a mechanic was on duty, when the convenience store was open or full service available.

Formal Definition:

```

OPTIMESET          = "<OPTIME" OPTIMESETattlist ">"
                    OPTIMESETcontents "</OPTIMESET>"

OPTIMESETattlist   = OPTIMESETid

OPTIMESETid        = "ID="      idvalue
idvalue             = text

OPTIMESETcontents  = 1*( "OPTERM" / "OPSEASONS" / "OPDAYS" /
                        "OPHOURS" / "OPMINUTES" / "OPSECONDS" )

```

4.1.1 Terms used in the OPTIMESET data value declaration

OPEN: Depending upon the property value being qualified, OPEN may indicate open, accessible, in-force, operative, available or any comparable state.

NOT-OPEN: Depending upon the property value being qualified, NOT-OPEN may indicate closed, non-accessible, not-in-force, non-operative, not-available or any comparable state.

NOT-DETERMINABLE: Dates and times that can not be determined as being open or closed.

DATE-TIME VALUE PAIR: Two date-time values separated by one or more solidus "/" characters. Value-pairs are either END-INCLUSIVE or END-EXCLUSIVE.

END-INCLUSIVE Value-pairs: The contents of a SKiCal object are formatted so as to enable unambiguous machine-readability, but there are of course considerable advantages in maintaining human readability of the same information. Unfortunately common date-time value pairs can be ambiguous. If we hear that someone works from nine to five, then we can with fairly high probability expect her to go home at five o'clock, but if we hear that someone will be in town from the first to the 15th, we, with less assuredness, might assume that they will leave town on the 16th. The former example is END-EXCLUSIVE while the later is END-INCLUSIVE.

To facilitate machine-readability it might be convenient to mandate that all value-pairs are either END-INCLUSIVE or END-EXCLUSIVE, but this memo allows both types, both for the sake of human-readability and the fact that END-EXCLUSIVE value-pairs offer an implicit degree of accuracy lacking in END-INCLUSIVE. For example END-EXCLUSIVE 170000/180000 is more suitable than END-INCLUSIVE 170000//175959.99999 in cases where that sort of precision is desirable. The distinction between these two types of value-pairs is made by the number of SOLIDUS characters separating the two values. One SOLIDUS ex: "/" indicates END-EXCLUSIVE pairs and two SOLIDUS ex "//" indicate END-INCLUSIVE value pairs.

0105//0110

START-INCLUSIVE END-INCLUSIVE a six day period including the whole of the 5th day and the whole of the 10th day of January

0105/0110

START-INCLUSIVE END-EXCLUSIVE a five day period including the whole of the 5th day and the whole of the 9th day of January

the following combinations are not currently described in this memo

START-EXCLUSIVE END-INCLUSIVE a five day period

START-EXCLUSIVE END-EXCLUSIVE a four day period

PERIOD-EXPLICIT / DURATION-EXPLICIT: This SKiCal memo stipulates

the use of either period-explicit or duration-explicit value-pairs. Though at first glance the difference may seem to be only representational, these value-pair declarations must not be treated as interchangeable. See below.

PERIOD-EXPLICIT: A period of time that is defined by a specific start and a specific end.

This means that whenever the start and end of one value-pair are designated with different time zone identifiers, or whenever a day-light savings change occurs inclusive to the period, or whenever a leap day or leap second occurs inclusive to the period, then the duration of the period value will be lengthened or shortened accordingly. The duration can only be determined when all possible fluctuations in leap years and leap seconds, day light savings schemes and time zone coordinates are accounted for. In a period-explicit value-pair the concluding and initiating instances of the pair are fixed to whatever politically or personally mandated timekeeping is in force for each end of the value-pair.

DURATION-EXPLICIT: A period of time that is defined by a specific start coupled to a duration of time or alternatively a specific end coupled to a duration of time.

In a duration-explicit value pair, the duration is fixed and can always be calculated as a number of seconds. The start or the end date-times of the duration-explicit value-pair can only be determined when all possible fluctuations in leap years and leap seconds, day light savings schemes and time zone coordinates are accounted for.

This means that whenever a day-light savings change is inclusive to the resulting period value, or whenever a leap day or leap second is inclusive to the period value, then the duration of the period value will be maintained and the start - alternatively end, date-time of the period will be moved forward or backwards in time accordingly. Since no timezone identifier can be concatenated to the duration value, a duration-explicit date-time value can only be referenced to one timezone.

TWO USES of ISO8601 TIME-DATE PERIODS: In duration-specific value-pairs the amount of time represented must unambiguously be reducible to a number of seconds. For example P2D is the equivalent of PT172800S (1 day = 86400 seconds. For this reason [RFC2445](#) has limited the possible members of this set to Weeks, Days, Hours, Minutes and Seconds, considering the ambiguity involved in the length of a Year or a Month or century.

At the same time the same members of the complete set; Centuries, Years, Months, Weeks, Days, Hours, Minutes, Seconds and fractions thereof, make convenient units for reoccurrences which are actually period-explicit. For example; reoccurrences on the third of every month will give instances in time of unequal duration from each other. In this memo the contents of the CYCLE attribute use the full ISO8601 set for reoccurrences.

4.1.1.1 Differences between ISO8601 and RFC2445

Negative Periods of time: When representing PERIOD-EXPLICIT value-pairs, [RFC2445](#) always places the date-time value first in the value pair. Then the dur-value, by being positive (default, or preceded by a plus) or negative (preceded by a minus), determines whether the date-time value serves as the start or end of the period. ISO8601 on the other hand signifies positive or negative durations by the ordering of values in the value pair. If the dur-value precedes (is to the left of) the date-time value then the date-time value to the right is the end of the period. If the dur-value is to the right of the date-time value then the date-time value serves as the start of the period.

This memo uses the [RFC2445](#) method for describing negative periods of time.

4.1.1.2 Optimelist DTD

Format Definition: The OpeningTimes set is defined by the following xml 1.0 DTD:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!ELEMENT OPTIMESSET (OPTERM | OPSEASONS | OPDAYS | OPHOURS | OPMINUTES |
OPSECONDS)+>
<!ATTLIST OPTIMESSET
  ID ID #REQUIRED
  >
<!ATTLIST OPTERM
  range CDATA #IMPLIED
  ID ID #IMPLIED
  IDREF IDREF #IMPLIED
  state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
  rangevaluetype (UTC | JulianDate | MJD | TP) #IMPLIED
  >
<!ATTLIST OPSEASONS
  range CDATA #IMPLIED
  ID ID #IMPLIED
  IDREF IDREF #IMPLIED
```



```

state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
cycle CDATA #IMPLIED
>
<!--ATTLIST OPDAYS
range CDATA #IMPLIED
ID ID #IMPLIED
IDREF IDREF #IMPLIED
cycle CDATA #IMPLIED
state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
rangevaluetype (WEEK | MONTH | YEAR | NUMBER | NAMED ) #REQUIRED
>
<!--ATTLIST OPHOURS
range CDATA #IMPLIED
ID ID #IMPLIED
IDREF IDREF #IMPLIED
state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
cycle CDATA #IMPLIED
>
<!--ATTLIST OPMINUTES
range CDATA #IMPLIED
ID ID #IMPLIED
IDREF IDREF #IMPLIED
state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
cycle CDATA #IMPLIED
>
<!--ATTLIST OPSECONDS
range CDATA #IMPLIED
ID ID #IMPLIED
IDREF IDREF #IMPLIED
state (OPEN | NOT-OPEN | UNDETERMINED) #REQUIRED
cycle CDATA #IMPLIED
>
<!--ELEMENT OPTERM (OPSEASONS | OPDAYS | OPHOURS | OPMINUTES | OPSECONDS)*>
<!--ELEMENT OPSEASONS (OPDAYS | OPHOURS | OPMINUTES | OPSECONDS)*>
<!--ELEMENT OPDAYS (OPHOURS | OPMINUTES | OPSECONDS)*>
<!--ELEMENT OPHOURS (OPMINUTES | OPSECONDS)*>
<!--ELEMENT OPMINUTES (OPSECONDS)*>
<!--ELEMENT OPSECONDS EMPTY>

```

[4.2](#) Term of the OPTIMESET

Value Name: OPTERM

Purpose: This value type is used to express an interval of time or a point in time. The OPTERM value type when specified is used in

computing the OPTIMESET. This value type uses the date and date-time value definitions of [RFC 2445](#) - 4.3.4 Date and 4.3.5 Date-Time as well as Julian Day, Modified Julian Date as standardized by the International Astronomical Union and the Network Time Protocol first described in [RFC 868](#) and elaborated upon in [RFC1305](#) .

The opterm value-type is unique in the OPTIMESET insomuch as it is "anchored" or fixed to the common era. No other OPTIMESET value-type shares this function. Without the Opterm, other value-types can never point to a specific time or date - only infinite free floating reoccurrences such as every Monday. On the other hand Opterms can not reoccur.

OPTERM serve the purpose of anchoring and constraining the reoccurrences of its contents, but is also suitable for declaring single events or points in time. In the later case the OPTERM will have no contents.

Formal Definition:

```

opterm          = "<OPTERM" optermattlist ">"
                  optermcontents "</OPTERM>"

optermattlist   = range [id] [idref] state rangevaluetype

range           = "range=" DQUOTE optermvalue
                  *["," optermvalue ] DQUOTE
id              = "ID=" idvalue
idref           = "IDREF=" idrefvalue
state           = "state=" ("NOT-OPEN" / "OPEN" / "UNDETERMINED")
rangevaluetype = "rangevaluetype=" ("Gregorian" / "JDN" / "MJD" / "TP")

optermvalue     = optermper_explvalue / optermdur_explvalue

optermper_explvalue = (
    (date / date-time) "/" [" / "]
    ((date / date-time) / term-text ) /

    jdn  "/" [" / "]
    ( jdn / term-text ) /

    mjd  "/" [" / "]
    ( mjd / term-text ) /

    tp   "/" [" / "]
    ( tp / term-text )

```


)

```

date-time    = date "T" time
date         = date-value

date-value   = date-fullyear date-month date-mday
date-fullyear = 4DIGIT
date-month   = 2DIGIT      ; 01- 12
date-mday    = 2DIGIT      ; 01-28, 01-29, 01-30, 01-31

time         = time-hour time-minute time-second [time-utc]

time-hour    = 2DIGIT      ;00-23
time-minute  = 2DIGIT      ;00-59
time-second  = 2DIGIT      ;00-60 [time-fraction]
               ; The "60" value is used to
               ; account for "leap" seconds.

time-fraction = 1*DIGIT
               ; as many digits as desired may
               ; may be used.

time-utc     = ( "Z" ) / ( ( "+" / "-" ) time-hour
               [ ":" time-minute ] )

term-text    = "THISANDFUTURE" / "THISANDPRIOR" / "POINT"

jdn  = float
      ; a number of days and fractions of days
      ; Julian Day Number JDN 0.0
      ; corresponds to 12h (noon) on the first
      ; day of the Julian Era, 1 January 4713 BC.

mjd  = float
      ; Modified Julian Date. The last five digits of
      ; the Julian Date (jdn - 2,400,000.5)

tp   = float
      ; Network Time Protocol representing the number
      ; of standard seconds since 19000101T000000
      ;(MJD 15,020.0).

optermdur_explvalue = (date / date-time) "/" rangeperiod
rangeperiod         = ( ["+" / "-"] "P"
                       (dur-week / dur-day / dur-time )

dur-week  = 1*DIGIT "W"
dur-day   = 1*DIGIT "D"
dur-time  = "T" (dur-hour / dur-minute / dur-second)
dur-hour  = 1*DIGIT "H" [dur-minute]
dur-minute = 1*DIGIT "M" [dur-second]

```



```
dur-second = 1 * DIGIT "S"
```

```
optermcontents = *( "OPSEASONS" / "OPDAYS" / "OPHOURS" / "OPMINUTES" /
"OPSECONDS" )
```

The OPTERM value type is made up of two date-time values separated by one - alternatively two, SOLIDUS characters; "/" or "/" (US- ASCII decimal 47), or one date-time value separated by one or two SOLIDUS characters, from a text value; By the use of THISANDPRIOR the date-time value pair signifies an OPTERM period whose start time is either not relevant or unknown. By the use of THISANDFUTURE the date-time value pair signifies an OPTERM whose conclusion is either not relevant or unknown.

OVERLAPPING VALUES: For all of the optimeset members it is permitted to have multiple intervals or points as the value of the range attribute, indicated by commas. For ex: range=18880808/P500D,18890909/P5D. When these values overlap such in the example above, no special consideration will be given to the overlapping date-times. Above all they do not cancel out each other or turn a CLOSED into an OPEN or an OPEN into a CLOSED

The OPTERM value includes an ID and an IDREF. Through the ID, an OPTERM value can be used in another OPTIMSET. Through the IDREF, an OPTERM declared in any other optimes set may be used.

For example, the following OPTERM might be declared:

```
OPTIMES:<OPTIMSET ID="Summer">
  <OPTERM ID="OPTERM3" range="19751214/THISANDFUTURE" state="OPEN">
    <OPSEASONS range="0515/0831" state="OPEN"/>
  </OPTERM>
</OPTIMSET>
```

and then referred to in another OPTIMES declaration.

```
<OPTIMSET ID="FALL">
  <OPTERM IDREF="OPTERM3" state="OPEN">
    <OPSEASONS range="0901/1115" state="OPEN"/>
```

[4.3](#) Seasons of the OPTIMSET

Value Name: OPSEASON

Purpose: This value type is used to express an interval of time. The

Opseasons value-type when specified is used in computing the OPTIMESET. The value representation of OPSEASONS is ISO8601:2000 [Section 5.2.1.3](#). sub-section d. "A specific day of the month", Basic Format "--MMDD", modified in this note by the exclusion of "--" to be "MMDD"

Formal Definition:

```

opseasons      = "<OPSEASONS" opseasonsattlist ">"
                  opseasonscontents "</OPSEASONS>"

opseasonsattlist = range [id] [idref] state [cycle]

range          = "range=" DQUOTE opseasonsvalue
                  *[" opseasonsvalue ] DQUOTE
id             = "ID=" idvalue
idref          = "IDREF=" idrefvalue
state          = "state=" ("NOT-OPEN" / "OPEN" / "UNDETERMINED")
cycle          = "cycle=" cycleperiod

opseasonsvalue = opseasonsper_explvalue / opseasonsdur_explvalue

opseasonsper_explvalue = impliedyeardate "/" [" /"]
                        ( impliedyeardate / seasons-text )

opseasondur_explvalue  = impliedyeardate "/"
                        rangeperiod

impliedyeardate        = date-month date-mday [ "T" time ]

seasons-text           =

date-month             = 2DIGIT      ; 01- 12
date-mday              = 2DIGIT      ; 01-28, 01-29, 01-30, 01-31

cycleperiod            = "P" (dur-year / dur-month / dur-week /
                              dur-day / dur-time )

dur-year              = 1*DIGIT "Y"
dur-month             = 1*DIGIT "M"

opseasonscontents = *( "OPDAYS" / "OPHOURS" / "OPMINUTES" / "OPSECONDS" )

```

Description: The start (left hand) date-time of an OPSEASONS period may be greater than the end (right hand) date-time of the OPSEASONS period. In which case the OPSEASONS is considered to straddle two

adjacent calendar years.

An OPSEASONS property value may occur more than once in an OPTIMESET.

Examples:

```
OPTIMES;NSREF="MX":<OPTIMESET ID="Summer" ><OPTERM range="19751214/
THISANDFUTURE">
```

```
  <OPSEASONS range="0515/0901"</OPTERM></OPTIMESET>
  PROHIBITED;OPREF="Summer":Studded snow tires
```

```
RESOURCES;IDREF="Winter_Season":Night
```

```
  Golf by artificial lighting
```

```
PERSONS;SKIROLE="In-house Tennis Pro";OPREF="Proschedule":
```

```
  Johanna Locke
```

```
RESOURCES;OPREF="cardays":Park access
```

```
  with motor vehicles
```

[4.4](#) Days of the OPTIMESET

Value Name: OPDAYS

Purpose: This value when specified is used in computing the OPTIMESET. This value uses a reduced set of the "BYxxx" values as defined in [RFC 2445](#) - 4.3.10 Recurrence Rule.

Formal Definition:

```
opdays      = "<OPDAYS" opdaysattlist ">"
               opdayscontents "</OPDAYS>"
```

```
opdaysattlist = range [id] [idref] [cycle] state rangevaluetype
```

```
range        = "range=" opdaysvalue
```

```
id           = "ID=" idvalue
```

```
idref        = "IDREF=" idrefvalue
```

```
cycle        = "cycle=" cycleperiod
```

```
state        = "state=" ("NOT-OPEN" / "OPEN" / "UNDETERMINED")
```

```
rangevaluetype = "daytype=" ("WEEK" / "MONTH" / "YEAR" /
                             "NUMBERED" / "NAMED" )
```

```
opdaysvalue = ( opwkdayvalue / opmodayvalue / opyrdayvalue )
```

```
opwkdayvalue = DQUOTE ( ordweekday / weekdayperiod )
               *[ ", " ( ordweekday / weekdayperiod ) ] DQUOTE
```

```
opmodayvalue = DQUOTE ( ordmoday / modayperiod )
               *[ ", " ( ordmoday / modayperiod ) ] DQUOTE
```



```
opyrdayvalue = DQUOTE ( ordyrday / ordyrdayperiod )
               * [ " , " ( yrday / yrdayperiod ) ] DQUOTE
```

```
ordweekday = [ ( [ "+" ] ordwk / "-" ordwk ) ] weekday
```

```
ordwk = 1DIGIT ; 1 to 5
```

```
weekday = "SU" / "MO" / "TU" / "WE" / "TH" / "FR" / "SA"
           ; Corresponding to SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY,
           ; FRIDAY, and SATURDAY days of the week.
```

```
ordmoday = [ "-" ordmo ] moday
```

```
ordmo = 2DIGIT ; 01 to 31
```

```
moday = 2DIGIT ; 01 to 31
```

```
ordyrday = [ "-" ordyr ] yrday
```

```
ordyr = 3DIGIT ; 01 to 366
```

```
yrday = 3DIGIT ; 01 to 366
```

```
weekdayperiod = weekdayperexplicit / weekdaydureexplicit
```

```
weekdayperexplicit = ordweekday "/" [ "/" ] ordweekday
                    ; weekdayperexplicit can be used to define an interval of ordinal
days
                    ; of the week such as "MO/SA" - from Monday until Saturday
```

```
weekdaydureexplicit = ordweekday "/" [ "/" ] rangeperiod
```

```
modayperiod = modayperexplicit / modaydureexplicit
```

```
modayperexplicit = ordmoday "/" [ "/" ] ordmoday
```

```
modaydureexplicit = ordmoday "/" [ "/" ] rangeperiod
```

```
yrdayperiod = yrdayperexplicit / yrdaydureexplicit
```

```
yrdayperexplicit = ordyrday "/" [ "/" ] ordyrday
```

```
    ; yrdayperiod can be used to define an interval of ordinal days
    ; of the year such as "055/095" - from the 55th
    ; to the 95th day of the year
```

```
opdayscontents = *( "OPHOURS" / "OPMINUTES" / "OPSECONDS" )
```

Description:

An OPDAYS value may occur more than once in an OPTIMESET. An OPDAYS property value may include one or more comma-separated date-time value pairs for each day or interval of days. Each WEEKDAY value can also be preceded by a positive (+n) or negative (-n) integer. If present, this indicates the nth occurrence of the specific day within the MONTH. For example, +1MO (or simply 1MO) represents the first Monday within the month, whereas -1MO represents the last Monday of the month.

Example:

[4.5](#) Hours of the OPTIMESET

Value Name: OPHOURS

Formal Definition:

```

ophours      = "<OPHOURS" ophoursattlist ">"
               ophourscontents "</OPHOURS>"

ophourssattlist = range [id] [idref] state [cycle]

range        = "range=" ophoursvalue
id           = "ID=" idvalue
idref        = "IDREF=" idrefvalue
state        = "state=" ("OPEN" / "NOT-OPEN" / "UNDETERMINED")
cycle        = "cycle=" cycleperiod

ophoursvalue = DQUOTE ( ophourper_explvalue /
                        ophourdur_explvalue )
               *[ "," ( ophourper_explvalue /
                        ophourdur_explvalue ) ]
               DQUOTE

ophourper_explvalue = time "/" ["/"] ( time / hour-text )

ophourdur_explvalue = time "/" ["/"] rangeperiod

ophourscontents = *( "OPMINUTES" / "OPSECONDS" )
```

[4.6](#) Minutes of the OPTIMESET

Value Name: OPMINUTES

Purpose: This value when specified is used in computing the OPTIMESET. This value uses time values as defined in ISO8601 - [Section 5.3.1.4](#). Truncated representations - paragraph f) Basic format.

Formal Definition:

```

opminutes      = "<OPMINUTES" opminutesattlist ">"
                  opminutescontents "</OPMINUTES>"

opminutessattlist = range [id] [idref] state [cycle]

range          = "range=" DQUOTE opminutesvalue
                  *[" opminutesvale]DQUOTE
id             = "ID=" idvalue
idref          = "IDREF=" idrefvalue
state          = "state=" ("NOT-OPEN" / "OPEN" / "UNDETERMINED")
cycle          = "cycle=" cycleperiod

```

```
opminutesvalue = opminutesper_explvalue / opminutesdur_explvalue
```

```
opminutesper_explvalue = time "/"
                        ( time / minute-text )
```

```
opminutesdur_explvalue = time "/" rangeperiod
```

```
opminutesscontents = *( "OPSECONDS" )
```

Description: This property value allows the use of minute and second time values as qualifiers for particular aspects of a SkiSource. Multiple "period" values are specified by a COMMA character; "," (US-ASCII decimal 44) separated list.

Examples:

[4.7](#) Seconds of the OPTIMESET

Value Name: OPSECONDS

Purpose: This value when specified is used in computing the OPTIMESET. This value uses time values as defined in ISO8601 - [Section 5.3.1.4](#). Truncated representations - paragraph g) Basic format.

Formal Definition:


```
opseconds      = "<OPSECONDS" opsecondsattlist ">"
                  "</OPSECONDS>"
```

```
opsecondsattlist = range [id] [idref] state [cycle]
```

```
range          = "range=" DQUOTE opsecondsvalue
                  *["," opsecondsvalue]DQUOTE
id              = "ID=" idvalue
idref           = "IDREF=" idrefvalue
state           = "state=" ("NOT-OPEN" / "OPEN" / "UNDETERMINED")
cycle           = "cycle=" cycleperiod
```

```
opsecondsvalue = opsecondsper_explvalue / opsecondsdur_explvalue
```

```
opsecondsper_explvalue = time "/"
                        ( time / seconds-text )
```

```
opsecondsdur_explvalue = time "/" rangeperiod
                        ; the seconds value-type has no contents
```

Description: This property value allows the use of seconds time values as qualifiers for particular aspects of a SkiSource. Multiple "period" values are specified by a COMMA character; "," (US-ASCII decimal 44) separated list.

Examples:

5. SkiCal specific Calendar Component

The body of an iCalendar object consists of a sequence of calendar properties and one or more calendar components. The calendar properties are attributes that apply to the calendar as a whole. The calendar components are collections of properties that express a particular calendar semantic. For example, the calendar component can specify an event, a to-do, a journal entry, time zone information, or free/busy time information, or an alarm.

A SkiCal extended iCalendar object may include a "VOPTIME" calendar component as defined by the following notation:

```
component = (
            / optimec
            )
```

5.1 The OpTime calendar component

Component Name: "OPTIME"

Purpose: Provide a grouping of component properties that describe the opening times of a SkiSource.

Format Definition: An "OPTIME" calendar component is defined by the following notation:

```
optimec      = "BEGIN" ":" "OPTIME" CRLF
               optimeprop *alarmc
               "END" ":" "OPTIME" CRLF

optimeprop   = *(
               ; the following are optional,
               ; but MUST NOT occur more than once

               ; the following are properties
               ; defined in RFC2445

               class / created / description / geo /
               last-mod / location / organizer / priority /
               dtstamp / seq / status / summary / transp /
```



```
uid / url / recurid /  
  
; the following are properties  
  
; defined in this memo  
  
skicalver / publisher / skuid /  
whurl  
  
; the following are optional,  
; and MAY occur more than once  
  
; the following are properties  
; defined in RFC2445  
  
attach / attendee / categories / comment /  
contact / related / resources /  
x-prop /  
  
; the following are properties  
; defined in this memo  
  
access / actions / bookings / control /  
directions / dtopen / optimes / namespace /  
orientation / partrel / paymethod /  
persons / placename / price /  
  
prohibited / promo / recommended  
required / skicalver / skilang  
things / thinks / title  
  
)
```

Description: An "OPTIME" calendar component is a grouping of component properties, possibly including "VALARM" calendar components, that describes date-time values that we normally refer to as opening hours or business hours or operating hours. The OPTIME component can be used to declare such times for any imaginable resource. Generally, Opening Time schedules in any significant number are not ideal for visual representation in traditional PIM calendars, since if stored in an "opaque" manner they would "clutter up" the limited visual space available. It is recommended that implementers develop alternative methods for visual representation of Optime calendar components.

The "OPTIME" calendar component is identical to the "VEVENT" calendar component with the exception that the Date-time related properties

such as DTSTART, DTEND and DURATION have been removed and replaced by the DTOPEN property.

Example: The following is an example of the "VOPTIME" calendar component used to represent the business hours of a video rental store that is open daily from 10am to 10pm, except for Fridays and Saturdays, when open to 12pm :

```
BEGIN:VOPTIME
UID:20020901T130000Z-123401@host.com
DTSTAMP:20020901T1300Z
OPTIMES:<OPTIMESSET ID="DEM09"><OPDAYS range="FR,SA"
state="OPEN" daytype="WEEK"><OPHOURS state="OPEN" range=
"100000/240000"/></OPDAYS><OPDAYS range="SO-TH" state=
"OPEN" daytype="WEEK"><OPHOURS state="OPEN" range=
"100000/220000"/></OPDAYS></OPTIMESSET>
TITLE:Videorama
DTOPEN;OPREF="TS":Monday
to Thursday from 10am to 10pm. Open to 12pm
on Fridays and Saturdays
CLASS:PUBLIC
CATEGORIES:ENTERTAINMENT,Video rentals
END:VOPTIME
```

The following is an example of a schedule for one academic course, extending across two semesters with a recess for the Christmas holidays:

```
BEGIN:VOPTIME
UID:20020901T130000Z-123402@host.com
DTSTAMP:20020401T130000Z
OPTIMES:<OPTIMESSET ID="DEM010"><OPTERM state=
"OPEN" range="20020825/20030701"><OPSEASONS state="OPEN"
range="0915/1220,0110/0522"><OPDAYS range="TU,TH"
state="OPEN" daytype="WEEK"><OPHOURS state="OPEN"
range="190000/210000"/></OPDAYS></OPSEASONS></OPTERM></OPTIMESSET>
</SET>
DTOPEN;OPREF="0110":Evening classes
TITLE:Sensitivity awareness class - HT013.
CLASS:PUBLIC
CATEGORIES:EDUCATION, BUSINESS ADMIN
END:VOPTIME
```

The following is an example of a "VOPTIME" calendar component used to represent the opening of a stretch of freeway. Since the freeway is expected to remain open indefinitely it suffices to merely indicate an opening using the TERM value type. In this example an opening

ceremony is also declared :

BEGIN:VOPTIME

UID:20020901T130000Z-123403@host.com

DTSTAMP:20020901T1300Z

OPTIMES ID="TYT":<OPTIMESSET ID="DEM011"><OPTERM
state="OPEN" range="20030225/THISANDFUTURE"/>
</OPTIMESSET>

OPTIMES:<OPTIMESSET ID="DEM012"><OPTERM
state="OPEN" range="20030225T15300Z/20030225T16300Z"/>
</OPTIMESSET>

DTOPEN;OPREF="TYT":Freeway opening

SUMMARY:The Martello bypass becomes operational.

ACTIONS;OPREF="R5T":Grand opening ceremony

CLASS:PUBLIC

CATEGORIES:TRANSPORTATION, ROADS, FREEWAYS

END:VOPTIME

6. SkiCal specific Component Properties

The class of SkiCal objects is a superset of the class of iCalendar objects. Therefore any component property, which MAY appear in a VEVENT iCalendar component, is also allowed in a SkiCal object. In addition, the following component properties are defined in this memo.

```
eventprop = / *(  
  
    ; the following are optional,  
    ; but MUST NOT occur more than once  
  
    publisher / skuid / whurl  
  
    ; the following are optional,  
    ; and MAY occur more than once  
  
    access / actions / bookings / control /  
    directions / optimes / namespace /  
    orientation / partrel / paymethod /  
    persons / placename / price /  
    prohibited / promo / recommended  
    required / skicalver / skilang  
    things / thinks / title  
  
    )
```

It is RECOMMENDED that publishers chose the terms used as TEXT type property values from authoritative lists of terms. [Section 10](#)

For reasons of clarity the properties self-describing the SkiCal object are presented under the "MANAGEMENT" header (Calendar object management), while properties describing the actual SkiSource being described are presented under the interrogative headers; "WHAT", "WHEN", "WHERE", "WHO", "WHY", and "WHOW". For example, the date when a SkiCal object describing a SkiSource was published would be defined by [RFC2445](#) 4.8.7.1 Date/Time Created, and this property would be sorted under MANAGEMENT while the date the actual SkiSource being described occurs is defined by [RFC2445](#) 4.8.2.4 Date/Time Start which would be sorted under WHEN. The creator of a SkiCal object describing a SkiSource is defined by [RFC2445](#) 4.8.4.3 Organizer, and this property would be sorted under MANAGEMENT while the "organizer" or producer of the actual SkiSource being described could be defined by the one of the SkiCal properties such as [Section 6.6.1](#) which would be sorted under WHO.

6.1 WHAT properties

The following properties serve as place-holders for the answers to user questions about the SkiSource such as "What is it?" and "What is happening?".

The properties defined in [RFC-2445](#) [3] related to WHAT are:

4.8.1.2 Categories

4.8.1.5 Description - The description property in [RFC2445](#) can be used to hold any sort of WHA information.

4.8.1.11 Status

4.8.1.12 Summary - The summary property in [RFC2445](#) can be used to hold any sort of WHA information.

In addition to the properties named above as defined in [RFC-2445](#) [3], a SkiCal object may include the following properties

6.1.1 Title

Property Name: TITLE

Purpose: This property specifies the title or name of the SkiSource being described.

Value Type: TEXT.

Property Parameters: Non-standard and language property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Public SkiSources often have titles . The title may not be directly descriptive of the SkiSource. The Title might be abstract in nature or it might be a copyrighted name that an owner wishes to see included in the calendar object. The following example illustrates the difference between SUMMARY and TITLE: A photo exhibition by photographer Collier Schorr in New York City called "Excuse Me While I Kiss the Sky" can be described by these two lines in a SkiCal file:

SUMMARY:Collier Schorr photos on exhibit in NYC

TITLE:Excuse Me While I Kiss the Sky

Format Definition: The property is defined by the following notation:

```
title      =    "TITLE" titleparam ":" text CRLF

              ; It is RECOMMENDED, when feasible, that the
              ; text value be chosen from a list,
              ; as described in this memo.

titleparam =    *(

              ; the following is optional,
              ; but MUST NOT occur more than once

              (";" languageparam ) / (";" nsrefparam ) /
              ( oprefparam ) /

              ; the following is optional,
              ; and MAY occur more than once

              (";" xparam)

              )
```

Example: The following are examples of this property:

```
TITLE:MacDonald's
TITLE;NSREF="TX":Les Miserables(c)
TITLE;LANGUAGE=sv:En kvall med Victor Borge
TITLE;LANGUAGE=en:One night with Victor Borge
TITLE;LANGUAGE=en;NSREF="FFL":Around the World in 80 Days
```

[6.1.2](#) Persons

Property Name: PERSONS

Purpose: To facilitate for TimeSpenders the discovery of SkiSources relating to specific people - living or dead.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Persons at a SkiSource might be a shop keeper, waiter, hostess, artist, a sports team, a guide, a disc jockey or a master of ceremonies and so forth. This property specifies named persons associated with the SkiSource, working at the SkiSource or present at the SkiSource. Persons expected to perform or participate, act or speak, contribute in person to the SkiSource - or to be honoured, referenced, criticized etc., in absence.

Format Definition: The property is defined by the following notation:

```
persons      =      "PERSONS" personsparam ":" text CRLF

                  ; It is RECOMMENDED that the text value be
                  ; chosen from a list, as described
                  ; in this memo.

personsparam =      *(
                  ; the following is optional,
                  ; but MUST NOT occur more than once

                  (";" languageparam ) / (";" skiroleparam ) /
                  (";" nsrefparam ) / (";" oprefparam ) /

                  ; the following is optional,
                  ; and MAY occur more than once

                  (";" xparam)

                  )
```

Example: The following are examples of this property:

```
PERSONS;SKIROLE="PERFORMER":Madonna
PERSONS;PRXSKIROLE="IUI:COMMEMORATED":Madonna
PERSONS:Victor Borge
PERSONS;PRXSKIROLE="JBP:Clarinetist":Woody Allen
PERSONS;SKIROLE="PRESENT":The Queen of Spain
PERSONS;SKIROLE="PERFORMER";LANGUAGE=sv:AIK a-laget i fotboll
PERSONS;SKIROLE="INVITED":the Hawthorn High School class of 1982
PERSONS;OPREF="SAPT";PRXSKIROLE="WPRL:REFERENCED":
Nelson Mandela
PERSONS;PRXSKIROLE="GGP:STUDIED":Socrates
PERSONS;SKIROLE="HOSTESS":Martha Edwards
```

[6.1.3](#) Thinks

Property Name: THINKS

Purpose: To facilitate for TimeSpenders the discovery of SkiSources relating to specific concepts, topics, themes and areas of interest

Value Type: TEXT

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property specifies a a topic or subject - a THINK.

Format Definition: The property is defined by the following notation:

```

thinks      =      "THINKS" thinksparm ":" text CRLF
                ; It is RECOMMENDED that the text value be
                ; chosen from a list, as described in
                ; this memo.
thinksparm  =      *(
                ; the following is optional,
                ; but MUST NOT occur more than once
                (";" languageparam ) / (";" skiroleparam ) /
                (";" nsrefparam )    / (";" oprefparam ) /
                ; the following is optional,
                ; and MAY occur more than once
                (";" xparam)
                )

```

Example: The following are examples of this property:

```

THINKS:World Peace
THINKS;SKIROLE="STUDIED":Our business strategy for the new millennium
THINKS;PRXSKIROLE="XJI:ANALYZED":The work of George Lucas
THINKS:Christianity, Buddhism
THINKS:Transaction Cost Economics

```

[6.1.4 Things](#)

Property Name: THINGS

Purpose: To facilitate for TimeSpenders the discovery of SkiSources relating to objects, things, specific goods and products, collectors items, various commodities and so forth.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Things pertaining to a resource-entity. For example; books, paintings, furniture, Gucci Handbags, Wrangler Jeans, Portuguese wines. This property specifies things of significance exhibited, featured, for sale, for-auction, for-rent, to be given away or observed at the resource-entity.

Format Definition: The property is defined by the following notation:

```
things          = "THINGS" thingsparam ":" text CRLF
                  ; It is RECOMMENDED that the text value be
                  ; chosen from a list, as described in
                  ; this memo.

thingsparam     = *(

                  ; the following is optional,
                  ; but MUST NOT occur more than once

                  (";" languageparam ) / (";" skiroleparam ) /
                  (";" nsrefparam )      / (";" oprefparam ) /

                  ; the following is optional,
                  ; and MAY occur more than once

                  (";" xparam)

                  )
```

Example: The following are examples of this property:


```
THINGS;PRXSKIROLE="II:LECTURED-ON":German Antiques
THINGS;SKIROLE="FOR-SALE":German Antiques
THINGS;PRXSKIROLE="UTTT:APPRAISED":German Antiques
THINGS;LANGUAGE=sv:Fritidsb&#x00E5;tar
```

```
THINGS;SKIROLE="LECTURED-ON":Ming Dynasty Porcelain
THINGS;SKIROLE="SERVED":Thai cuisine
THINGS;PRXSKIROLE="M:AUCTIONED":The Vanderbilt Jewels
THINGS;PRXSKIROLE="PP:REFERENCED":The holy Grail
```

6.1.5 Actions

Property Name: ACTIONS

Purpose: To facilitate for TimeSpenders the discovery of resource-entities in relation to things happening, processes, movements, etc.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Actions at a SkiSource. For example; a sale, an auction, a house warming, a legal process, a business process, an awards process etc. This property specifies actions of significance taking place at the resource-entity.

Format Definition: The property is defined by the following notation:


```

actions          = "ACTIONS" actionsparam ":" text CRLF
                  ; It is RECOMMENDED that the text value be
                  ; chosen from a list, as described in
                  ; this memo.

actionsparam     = *(
                  ; the following is optional,
                  ; but MUST NOT occur more than once

                  (";" languageparam ) / (";" nsrefparam ) /
                  (";" oprefparam ) /

                  ; the following is optional,
                  ; and MAY occur more than once

                  (";" xparam)

                  )

```

Example: The following are examples of this property:

```

ACTIONS:Vote on Stock split
ACTIONS:Bankruptcy proceedings
ACTIONS:Draft approval
ACTIONS;LANGUAGE=sv:utf&#x00F6;rs&#x00E4;lning
ACTIONS:Lecture
ACTIONS:Queen Mary IV launch
ACTIONS;OPREF="SCH":Team tryouts
ACTIONS:Spring term enrollment
ACTIONS:wedding

```

[6.1.6](#) Part relationship to another SkiSource

Property Name: PARTREL

Purpose: This property specifies another SkiSource, to which the SkiSource being declared is related. This does not imply an inheritance of properties from the external SkiSource.

Value Type: TEXT. (SKUID for another SkiCal/iCalendar object.)

Property Parameters: Non-standard property parameters can be specified on this property. It is RECOMMENDED that a Common Name parameter (cnparam) be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property allows for the publisher of a SkiSource to indicate a relation to another SkiSource. This property differs from the RELATED-TO property of [RFC-2445](#) [3], which defines a relationship between calendar objects describing SkiSources and not between SkiSources themselves.

Format Definition: The property is defined by the following notation:

```
partrel          = "PARTREL" partrelparam ":" text CRLF
partrelparam     =      *(
                        ; the following is optional,
                        ; but MUST NOT occur more than once
                        (";" languageparam ) / (";" cnparam )      /
                        (";" reltypeparam) / (";" nsrefparam ) /
                        (";" oprefparam ) /
                        ; the following is optional,
                        ; and MAY occur more than once
                        (";" xparam)
                      )
```

Example: The following are examples of this property:

```
PARTREL;RELTYPE=CHILD;CN=Vattenfestivalen:<19990401T080045Z-F192713@
.se>
```

```
PARTREL;CN=2004 Winter Olympics;RELTYPE=CHILD:<19991202@olympic.org>
```

```
PARTREL;RELTYPE=SIBLING:<ev32987-a33498@calendar.com>
```

[6.1.7](#) Language used at the SkiSource

Property Name: SKILANG

Purpose: This property specifies the main language, used at the SkiSource.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be

specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Language used at the SkiSource. For example, the main language of a theatre play, the language spoken by the teacher of a course, or the languages spoken by the salespeople in a boutique.

NOTE: If the SkiSource is being translated, the information about what languages are available as translations could be published under RESOURCES.

NOTE: If knowledge of a certain language is required in order to appreciate the SkiSource, this should be indicated by a REQUIRED (or RECOMMENDED) property.

Format Definition: The property is defined by the following notation:

skilang = "SKILANG" skilangparam ":" language CRLF

skilangparam = *(
; the following is optional,
; but MUST NOT occur more than once

(";" oprefparam) / (";" itemparam) /

; the following is optional,
; and MAY occur more than once

(";" xparam)
)

language = <Text identifying a language, as defined in [RFC-1766](#)>

Example: The following are examples of this property:

SKILANG:en,fr
SKILANG:sv
SKILANG;OPREF="001":en
SKILANG;OPREF="002":sv
SKILANG;ITEM="All our guides speak English":en
SKILANG;ITEM="subtitles":da

6.1.8 Orientation

Property Name: ORIENTATION

Purpose: This property specifies the target audiences for the SkiSource.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property can facilitate SkiSource discovery. It can indicate that a SkiSource has a specific target audience or consumer type, or that it is related to a specific cause, faith, professional group, gender, ethnic group etc. Infomediaries can use this property to define their own specific customer orientation types without altering the values in CATEGORIES.

Format Definition: The property is defined by the following notation:


```

orientation      =    "ORIENTATION" orientationparam ":" text CRLF

                        ; It is RECOMMENDED that the text value be
                        ; chosen from a list, as described in
                        ; this memo.

orientationparam  = *(

                        ; the following is optional,
                        ; but MUST NOT occur more than once

                        (";" orienttypeparam ) /

orienttypeparam   = (( "ORIENTTYPE" "=" text ) /
                      ( "PRXORIENTTYPE" "=" prefix ":" text ) /

                      (";" languageparam ) / (";" nsrefparam ) /
                      (";" oprefparam ) / (";" itemparam) /

                      ; It is RECOMMENDED that the text value be
                      ; chosen from a list, as described in
                      ; this memo.
                      ; the following is optional,
                      ; and MAY occur more than once

                      (";" xparam)
                    )

```

Value Type: TEXT.

Example: The following are examples of this property:

```

ORIENTATION;NSREF="G";ORIENTTYPE=Religious:Methodist
ORIENTATION;PRXORIENTTYPE="DR:DemographicsRus":Soccer Moms
ORIENTATION;ORIENTTYPE=DemographicsRus:Champagne Set
ORIENTATION;NSREF="DR":Senior Citizens
ORIENTATION;OPREF="ty";ORIENTTYPE=Gender:Female
ORIENTATION;ORIENTTYPE=TimeOut:Gay
ORIENTATION;ITEM="Laser scapels";ORIENTTYPE=Occupation:Medical

```

[6.1.9](#) What URL

Property Name: WHURL

Purpose: This property defines a Uniform Resource Locator (URL) associated with the SkiSource the SkiCal object is describing.

Value Type: URI

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property may be used in a SkiCal object to convey a URL for information about the SkiSource. The difference between WHURL and the iCal Property URL as defined in [RFC2445 section 4.8.4.6](#) is that while URL points to some place "where a more dynamic rendition of the calendar information associated with the calendar component can be found", WHURL points to the "home page" of the SkiSource itself. This memo does not attempt to standardize the form of the URI, nor the format of the resource pointed to by the property value.

Format Definition: The property is defined by the following notation:

```
whurl          =  "WHURL" whurlparam ":" uri CRLF
whurlparam     =  *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once
                    (";" languageparam ) / (";" nsrefparam )
                    ; the following is optional,
                    ; and MAY occur more than once
                    (";" xparam)
                  )
```

Example: The following are examples of this property:

WHURL:http://www.dalasphilharmonic.com/events/030516/mehta.htm

6.1.10 SkiSource Unique Identifier

Property Name: SKUID

Purpose: This property specifies a persistent, globally unique identifier for the SkiSource.

Value Type: TEXT

Property Parameters: Non-standard property parameters can be specified on this property.

Description: This property provides a method for determining a definite, authoritative and unique identification of a SkiSource. SKUID differs from the UID property defined in [RFC2445 section 4.8.4.7](#), whereas UID identifies a calendar component (SkiCal object), SKUID identifies the SkiSource being defined by the calendar component.

The SKUID itself MUST be a globally unique identifier. The generator of the identifier MUST guarantee that the identifier is unique. There are several algorithms that can be used to accomplish this. The identifier is RECOMMENDED to be the identical syntax to the [RFC-822 \[7\]](#) addr-spec. A good method to assure uniqueness is described in [RFC-2445 \[3\]](#), section 4.8.4.7 about Unique Identification Numbers.

Format Definition: The property is defined by the following notation:

```
skuid          = "SKUID" skuidparam ":" text CRLF

skuidparam     = *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once
                    (";" languageparam ) / (";" nsrefparam )

                    ; the following is optional,
                    ; and MAY occur more than once

                    (";" xparam)
                )
```

Example: The following are examples of this property:

```
SKUID:20021001T090045Z-4000F192713-0052@qwack.com
SKUID;NSREF="TG":20021001T090045Z-4000F192713-0052@qwack.com
```

[6.2](#) WHEN properties

The following properties answer time and date related questions about the SkiSource, such as "When is it open" and "When does it happen?".

The properties defined in [RFC-2445 \[3\]](#) related to WHEN are:

4.8.2 Date and Time Component Properties

4.8.3 Time Zone Component Properties

4.8.5 Recurrence Component Properties

6.2.1 Date-time open

Property Name: DTOPEN

Purpose: This property can be used to specify reoccurring date-time schedules such as the opening -, operating -, accessible times of a SkiSource. This Property is suitable for "persistent resources", that is resources that unlike events have regular persistent operating hours. Though in some cases a publisher could describe opening hours using the existing time-date properties and reoccurrence rules of [RFC2445](#), those rules are not optimized for this sort of use. Further, a collection of such SkiSources, for example all the shops and restaurants in one's neighbourhood, would clutter a traditional PIM calendar, where events are expected to happen in a more or less serial fashion.

Conformance: This property can be specified in a "VOPTIME" calendar component.

Value Type: The default value type is TEXT.

Property Parameters: Non-standard, value data type, time zone identifier property parameters can be specified on this property.

Description: This property defines access information for a SkiSource - what are usually called the hours of business or operation. The date time values are stated through the OPTIMSET of property Values and are referred to with the opref property parameter value. The value of the Property is a text label describing what the opening times derived through the OPTIMSET are referring to. The OPTIMSET can be used to qualify several of the SkiCal properties. If a SkiSource can be considered to have a "main", "primary" or "essential" Opening Times, then it is recommended that the DTOPEN property be used to declare these.

There is a known discrepancy in [RFC2445](#). In [section 4.6.1](#) Event Component, the ABNF declares that there are no obligatory properties in a VEVENT Component, while in 4.8.2.4 Date/Time Start it is stated that "The property is REQUIRED in "VEVENT" calendar components. Even though the ABNF takes precedent over prose, until this discrepancy is resolved it is recommended that SkiCal publishers always include a DTSTART property in a SkiCal object. If the publishers intention is to declare Opening Times and not the date-times of a specific event, it is recommended that they use the VOPTIME calendar component.

Format Definition: The property is defined by the following notation:


```
dtopen      = "DTOPEN" opentimeparam ":" TEXT CRLF
opentimeparm = *(
    ; the following are optional,
    ; but MUST NOT occur more than once

    ( opref / (":" languageparam ) /
      (":" nsrefparam ) /

    ; the following is optional,
    ; and MAY occur more than once

    *(":" xparam)

    )
```

Example: The following are examples of this property:

DTOPEN;opref="Bstandard":Balthazar's schedule

6.3 WHERE properties

The following properties serve as place-holders for the answers to user questions about the SkiSource such as "Where does it happen?" and "Where do I find the SkiSource?".

The properties defined in [RFC-2445](#) [3] related to WHERE are:

4.8.1.6 Geographic Position (GEO)

4.8.1.7 Location

SkiCal objects SHOULD use vCards [[RFC 2426](#)] as an ALTREP parameter value to the LOCATION property parameter, in order to provide machine readability and maintain information structure when exchanging data. For example, the alternate representation may specify either an LDAP URI pointing to an LDAP server entry or a CID URI pointing to a MIME body part containing a vCard for the location.

In addition to the properties named above as defined in [RFC-2445](#) [3], a SkiCal object may include the following properties.

6.3.1 Venue

Property Name: VENUE

Purpose: This property classifies the type of physical context in

which an SkiSource takes place.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: The venue parameter divides SkiSources into a number of distinctly different groups, this is useful when there is a need to quickly reduce the number of SkiSources in a selection. For example: When searching for outdoor sport SkiSources to take part in, it will help not having to browse through listings of TV shows showing sports.

Format Definition: The property is defined by the following notation:

```
venue          =   "VENUE" venueparam ":" venuetype CRLF
venueparam     =   *(
                        ; the following is optional,
                        ; and MAY occur more than once
                        (";" xparam)
                    )
venuetype      =   "Internet"      /
                    "Radio"         /
                    "TV"            /
                    "Outdoors"      /
                    "Indoors"       /
                    "Travel-transit"
```

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Example: The following are examples of this property:

```
VENUE:Outdoors
VENUE:TV
```

[6.3.2](#) Directions

Property Name: DIRECTIONS

Purpose: This property can be used to specify helpful directions for finding the SkiSource.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Very often when a public SkiSource is published, there are instructions other than the address for finding the location. In metropolitan areas this could be just the name of a subway stop, while on the sea it could possibly be a path defined by a series of GEO (longitude + latitude) coordinates that will help sailors avoid shallow water.

Format Definition: The property is defined by the following notation:


```

directions      = "DIRECTIONS" directionsparam ":" text CRLF
directionsparam = *(
    ; the following is optional,
    ; but MUST NOT occur more than once

    (";" languageparam ) / (";" altrepparam ) /
    (";" travelbyparam) / (";" geo-path) /
    (";" nsrefparam ) /
    ; the following is optional,
    ; and MAY occur more than once

    (";" xparam)
)

travelbyparam    = "TRAVELBY" "="

    ("walk" / "bicycle" / "boat" / "car" / "rail" /
    "air" / "public"transportation" /
    "frequency" / "uri" )

; Implementers who do not intend to have a complex GUI for
; various types of directions could concatenate all DIRECTIONS
; fields which have a TRAVELBY parameter into one DIRECTIONS field
; without a TRAVELBY parameter

geo-path         =      "GEO-PATH" "=" 1*(float "," float " ,")
                    (float " , " float)

                    ; machine readable directions
                    ; coordinate pair sequence approaching destination

```

Example: The following are examples of this property:

```

DIRECTIONS;TRAVELBY=public transportation;LANGUAGE=sv:Tunnelbanes
tation Globen
DIRECTIONS:Rum 207, plan 2

```

6.3.3 Place name

Property Name: PLACENAME

Purpose: This property can be used to specify a well-known name of the SkiSource or a location where the SkiSource takes place.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Names, which have reached a status of common knowledge among a significant portion of the populace or within a particular segment (eg. Taxi drivers). If the exact name is chosen from a naming list as discussed in this memo, [Section 10](#), further details may be available to the uninitiated.

Format Definition: The property is defined by the following notation:

```
placename      =    "PLACENAME" placeparam ":" text CRLF
                  ; It is RECOMMENDED that the text value be
                  ; chosen from a list, as described in
                  ; this memo.

placeparam      =    *(
                  ; the following is optional,
                  ; but MUST NOT occur more than once

                  (";" languageparam ) / (";" nsrefparam ) /

                  ; the following is optional,
                  ; and MAY occur more than once

                  (";" xparam)
                  )
```

Example: The following is an example of this property:

```
PLACENAME:Globo
PLACENAME:Central Park
PLACENAME:The Commons
PLACENAME:Muscle Beach
```

[6.4](#) WHOW (HOW) properties

WHOW properties represent possible conditions involved in interaction between a TimeSpender and a SkiSource - the rules, qualifications, economics, quirks and hindrances involved.

These properties serve as place-holders for the answers to TimeSpender questions such as, "Can I bring a camera?", "How can I get a ticket?", "Is there an age requirement?", "What does the daily special cost?"

The properties defined in [RFC-2445](#) [3] that are related to WHOW are:

4.8.1.5 Description - The description property in [RFC2445](#) can be used to hold any sort of WHA information.

4.8.1.10 Resources - SkiCal uses Resources as stipulated in [RFC2445](#).

Example: The following are examples of RESOURCES used in SkiCal:

RESOURCES:Valet parking
RESOURCES;OPREF="40000/THISANDPRIOR":Hot food until midnight

RESOURCES:Drinking water
RESOURCES:Smokers section
RESOURCES:Butane refills
RESOURCES:Changing Rooms

6.4.1 Requirements

Property Name: REQUIRED

Purpose: This property can be used to specify requirements made by the SkiSource on the TimeSpender.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property can be used to specify requirements made on the TimeSpender.

Format Definition: The property is defined by the following notation:


```
requirements      =      "REQUIRED" requireparam ":" text CRLF

                        ; It is RECOMMENDED that the text value be
                        ; chosen from a list, as described in
                        ; this memo.

requireparam = *(

                        ; the following is optional,
                        ; but MUST NOT occur more than once

                        (";" languageparam ) / (";" altrepparam )
                        (";" nsrefparam ) /
                        ; the following is optional,
                        ; and MAY occur more than once

                        (";" xparam)
                        )
```

Example: The following are examples of this property:

REQUIRED:Children must have adult accompaniment

REQUIRED;ALTREP="HTTP://www.nmpda.org/codes/pg13":pg13
REQUIRED:Formal attire
REQUIRED:Lions Club Members only
REQUIRED:Valid drivers license
REQUIRED:Hores ridding experience
REQUIRED:Reservations made at least one week in advance
REQUIRED:All pets on leashes please
REQUIRED:white soled gym shoes
REQUIRED:Major credit card
REQUIRED:No rain - Event cancelled in case of bad weather
REQUIRED:minimum height on all rides 1.40 cm

6.4.2 Recommendations

Property Name: RECOMMENDED

Purpose: This property can be used to specify recommendations to the TimeSpender wishing to interact with the SkiSource

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: Recommendations made by the Publisher xxx.

Format Definition: The property is defined by the following notation:

```
Recommended      =      "RECOMMENDED" recommendedparam ":" text CRLF
                        ; It is RECOMMENDED that the text value be
                        ; chosen from a list, as described in
                        ; this memo.

recommendedparam =      *(
                        ; the following is optional,
                        ; but MUST NOT occur more than once

                        (";" languageparam ) / (";" altrepparam )
                        (";" nsrefparam ) /
                        ; the following is optional,
                        ; and MAY occur more than once

                        (";" xparam)
                        )
```

Example: The following are examples of this property:

```
RECOMMENDED:Flash Camera
RECOMMENDED:Warm Clothes
RECOMMENDED:At least 2 hours to see the main exhibition
RECOMMENDED:No Children
RECOMMENDED:do not leave your possessions unattended
RECOMMENDED:Bring you own lunch
RECOMMENDED:Sturdy Hiking boots
RECOMMENDED:Polio vaccinations
RECOMMENDED:Stay on the trail
RECOMMENDED:Get here early
RECOMMENDED:It is difficult to find parking space - take public transport
```

6.4.3 Prohibited

Property Name: PROHIBITED

Purpose: This tells the TimeSpender what activities or things are PROHIBITED at the SkiSource.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: That which is prohibited

Format Definition: The property is defined by the following notation:

```
prohibited      =    "PROHIBITED" prohibitedparam ":" text CRLF
                    ; It is RECOMMENDED that the text value be
                    ; chosen from a list, as described in
                    ; this memo.

prohibitedparam =    *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once

                    (";" languageparam ) / (";" altrepparam ) /
                    (";" nsrefparam ) /

                    ; the following is optional,
                    ; and MAY occur more than once

                    (";" xparam)
                    )
```

Example: The following are examples of this property:

```
PROHIBITED:minors
PROHIBITED:possession of fire arms
PROHIBITED:possession of cameras
PROHIBITED:men
```

6.4.4 Price

Property Name: PRICE

Purpose: This property gives pricing information about the SkiSource.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property can be used to provide information about the pricing structure at a SkiSource. Due to a large divergence in pricing structures, it is not intended that all aspects of pricing will be possible to represent in a machine readable format using SkiCal. This syntax will allow for simpler pricing structures to be defined.

Format Definition: The property is defined by the following notation:

```

price          =  "PRICE" priceparam ":" price CRLF
priceparam     =  *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once

                    (";" languageparam ) / (";" altrepparam ) /
                    (";" itemparam) / (";" currencyparam)
                    (";" nsrefparam ) /

                    )

                    ; The text value COULD be
                    ; chosen from a list, as described in
                    ; this memo. Such a list could
                    ; contain words such as:
                    ; Admission
                    ; Breakfast
                    ; Starting Fee
                    ; Room

                    ; Happy hour
                    ; Monthly fee

price          =  float

currencyparam  =  "CURRENCY" "=" <currency code as
                    defined in ISO4217

                    ; the following is optional,
                    ; and MAY occur more than once

                    (";" xparam

                    )

```

Example: The following are examples of this property:

```

PRICE;PRXITEM="J:Admission":0
PRICE;ITEM="Admission";CURRENCY=SEK:135
PRICE;ITEM="Monthly subscription";CURRENCY=USD:2.75
PRICE;ITEM="Daily Lunch";CURRENCY=CHF:5.75
PRICE;ITEM="Shoe Shines";CURRENCY=USD:3.50
PRICE;ITEM="One hours ice skating";CURRENCY=GBP:7.95
PRICE;ITEM="All day parking";CURRENCY=USD:19

```


6.4.5 Bookings

Property Name: BOOKINGS

Purpose: This property defines where and when reservations or tickets for the SkiSource can be obtained.

Value Type: TEXT.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: When applicable, tickets, reservations or other means needed to interact with a SkiSource can often be obtained from ticketing agents or directly from the SkiSource organizer.

Format Definition: The property is defined by the following notation:

```
bookings          =    "BOOKINGS" bookingsparam ":" text CRLF
bookingsparam     =    *(
                        ; the following is optional,
                        ; but MUST NOT occur more than once
                        (";" languageparam ) / (";" altrepparam ) /
                        (";" opref) / (";" nsrefparam ) /
                        (";" itemparam ) /
                        ; the following is optional,
                        ; and MAY occur more than once
                        (";" xparam)
```

Examples: The following are examples of this property:


```
BOOKINGS;OPREF="kop":Ticketron biljetter
BOOKINGS;OPREF="URE":Ticketron biljetter
BOOKINGS;ITEM="The dinner banquet";OPREF="998";ALTREP="http\
://www.ticket.
com/find.asp?858789":WebTickets
BOOKINGS;OPREF="999":At the ticket
booth outside of the concert hall
BOOKINGS;OPREF="R090":Telephone: +1-
800-HOCKEYTIK
BOOKINGS;OPREF="RIXOR":tel +46 (8) 123 456
```

6.4.6 Special access facilities

Property Name: ACCESS

Purpose: This property defines the accessibility of the SkiSource for persons with special needs.

Value Type: BOOLEAN.

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: People with disabilities and other special needs have much to gain from the availability of well-structured and therefore easily searchable information about facilities and arrangements for accessibility.

SkiCal objects have a Boolean property to indicate the availability of handicap facilities.

Format Definition: The property is defined by the following notation:


```

access = "ACCESS" itemparm ":" boolean CRLF

        ; It is RECOMMENDED that the text value be
        ; chosen from a list, as described in
        ; this memo.

        ; the following is optional,
        ; but MUST NOT occur more than once

        (";" languageparam ) / (";" opref )      /
        (";" altrepparam)    / (";" itemparm )    /
        (";" nsrefparam )    /

; as soon as there is a standardized way of expressing
; special facilities for accessibility digitally

; it is RECOMMENDED that SkiCal
; files refer to such a file through the ALTREP mechanism.

*(

    ; the following is optional,
    ; and MAY occur more than once

    (";" xparam)

)

```

Example: The following are examples of this property:

```

ACCESS;PRXITEM="SH0:wheelchair-ramps":TRUE
ACCESS;PRXITEM="TT:elevator":TRUE

```

[6.4.7](#) Accepted method of payment

Property Name: PAYMETHOD

Purpose: This property defines the accepted methods of payment for the SkiSource.

Value Type: TEXT

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property can be used to specify the payment method in practice at the SkiSource.

Format Definition: The property is defined by the following notation:

```

paymethod      =    "PAYMETHOD" paymethodparam ":" text CRLF

                    ; It is RECOMMENDED that the text value be
                    ; chosen from a list, as described in
                    ; this memo.

paymethodparam  =    *(

                    ; the following is optional,
                    ; but MUST NOT occur more than once

                    (";" altrepparam ) / (";" nsrefparam ) /
                    (";" itemparam )   / (";" opref )   /
                    ; the following is optional,
                    ; and MAY occur more than once

                    (";" xparam)

                    )

```

Example: The following are examples of this property:

```

PAYMETHOD;ITEM="Purchases in Excess of 15USD:VISA
PAYMETHOD:AMEX
PAYMETHOD:SET
PAYMETHOD;OPREF="20020505/THISANDFUTURE":We will no longer accept per
sonal checks.
PAYMETHOD;NSREF="PM":BABS37.2

```

6.5 WHY properties

The following properties serve as place-holders for the answers to TimeSpender questions about the SkiSource such as "Why should I attend?" and "Why would this be interesting?".

WHY gathers promotional, instructive or informational material under one roof. It is hoped that this will promote expedience. Many applications will be operating in a narrow bandwidth environment; this is specially the case with mobile cellular phones, PDA's and other digipheralia.

By placing content which might be bulky and bandwidth consuming in a

specifically defined area of the Calendar Object, the TimeSpender as well as the SkiSource publisher is given greater control over individual property access.

There is no property defined in [RFC-2445](#) [3] that is directly related to WHY. Though iCal publishers could use the ATTACHMENT property to wrap promotional material or put promotional texts into DESCRIPTION.

[6.5.1](#) Promotion

Property Name: PROMO

Purpose: This property allows for the organizer of the SkiSource to refer to advertising material, in various forms.

Value Type: URI

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: This property could be a link to online versions of a movie trailer, a web campaign, a radio spot or a newspaper ad.

Format Definition: The property is defined by the following notation:

```
promo          = "PROMO" promoparam ":" [ TEXT ] CRLF
promoparam     = *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once
                    (";" altrepparam) / (";" languageparam) /
                    (";" nsrefparam) / (";" itemparam) /
                    ; the following is optional,
                    ; and MAY occur more than once
                    (";" xparam)
                )
```

Example: The following are examples of this property:


```
PROMO;ALTREP="http://www.stadsteatern.se/affischer/othello2000.gif":
  Download our poster
PROMO;ALTREP="http://www.torget.se/kampanj/julsonger.i.huset.html"
PROMO;LANGUAGE=en:This is going to be a great party.
  Everybody will be there. If you're not - you will regret it.

PROMO;LANGUAGE=sv;ENCODING=QUOTED-PRINTABLE:F=F6rbundet
  firar bara 60 =E5r en g=E5ng.
PROMO;LANGUAGE=en;ALTREP="http://www.alltomstockholm.se/reviews/12/":
  See what folks are saying about us!
PROMO;ITEM="The Weeping Pillow";ALTREP="http://www.dn.se/literature/
  990505.html":Read the rave reviews!
```

6.6 WHO properties

The following property serves as place-holders for the answers to user questions about the SkiSource such as; Who is responsible? Who is the owner? Who authorized this? What organizations are involved?

The property defined in [RFC-2445](#) [3] related to WHO is:

4.8.4.2 Contact

It is RECOMMENDED that SkiCal objects use vCards [[RFC 2426](#)] as an ALTREP parameter value to the CONTACT property parameter, in order to provide machine readability and maintain information structure when exchanging data. For example, the alternate representation may specify either an LDAP URI pointing to an LDAP server entry or a CID URI pointing to a MIME body part containing a vCard for the contact.

In addition to the property named above as defined in [RFC-2445](#) [3], a SkiCal object may include the following property;

6.6.1 Control

Property Name: CONTROL

Purpose: This property indicates responsibilities, jurisdictions, ownership, and other formal or informal relationships for parties involved in the SkiSource.

Value Type: TEXT. (MAILTO)

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: To declare relationships, responsibilities and liabilities of formal, informal, or contractual nature amongst parties involved in a SkiSource or particular aspects of a SkiSource. The CONTROL property is used to define these responsibilities and jurisdictions.

Format Definition: The property is defined by the following notation:

```
control          =    "CONTROL" controlparam ":"    uri CRLF

                    ; the value MAY be a MAILTO URI, as defined
                    ; by RFC-1738.

controlparam     =    *(

                    ; the following is optional,
                    ; but MUST NOT occur more than once

                    (";" languageparam ) / (";" cnparam )    /
                    (";" skiroleparam)    / (";" altrepparam) /
                    (";" nsrefparam )    / (";" itemparam ) /
                    (";" opref )    /
                    ; It is highly RECOMMENDED that SkiCal
                    ; objects actually
                    ; use the cnparam since some applications will not
                    ; bother to read the altrep'ed vCard.
                    ; the following is optional,

                    ; and MAY occur more than once
                    (";" xparam)

                    )
```

Example: The following are examples of this property.

```
CONTROL;PRXSKIROLE="GTN:Producer";CN=Nobelkommitten:MAILTO:
info@nobel.se
CONTROL;NSREF="CCCD";SKIROLE=Producer;CN=Opera house:MAILTO:
info@opera.de
CONTROL;PRXSKIROLE="L:OWNER";MAILTO:jean-marie@petiteville.fr
CONTROL;PRXSKIROLE="RP:contracting agency":MAILTO:info@ematelstar.se
CONTROL;ITEM="Cities in motion exhibition";SKIROLE="sponsor";CN=Stoc
kholms stad:MAILTO:
kultur@stadshuset.a.se
CONTROL;OPREF="20030101/THISANDFUTURE";SKIROLE=in association
with;CN=Svenska Turistforbundet:MAILTO:info@stf.se
CONTROL;PRXSKIROLE="SKI:members-of";CN=Rotary international:MAIL
```


T0:rotary@rotary.org

[6.7](#) MANAGEMENT properties

The above SkiCal component properties all describe the SkiSource itself (description) and not, as is the case with many iCalendar component properties, the entry in a calendar user agent (CUA) or calendar server (CS) (self-description).

It is possible that several, or even many calendar objects could refer to the same SkiSource. Each of these calendar objects could have their own publisher, while the SkiSource itself has only one responsible authority.

The properties defined in [RFC-2445](#) [3] related to MANAGEMENT are:

4.8.1.3 Classification

4.8.1.4 Comment

4.8.4.3 Organizer

4.8.4.5 Related-to

4.8.4.6 Uniform Resource Locator

4.8.4.7 Unique Identifier

4.8.7.1 Date/Time Created

4.8.7.2 Date/Time Stamp

4.8.7.3 Last Modified

4.8.7.4 Sequence Number

[6.7.1](#) Publisher

Property Name: PUBLISHER

Purpose: Describes the organization or private party publishing the SkiSource object.

Value Type: URI

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: The ORGANIZER of a SkiSource is not always the one who makes the information about the SkiSource publicly available. Many SkiCal objects will be published by organizations or private parties who are not an "ORGANIZER" as defined in [RFC2445](#). The role of the publisher is sometimes referred to as 'Infomediary'.

Format Definition: The property is defined by the following notation:

```

publisher      = "PUBLISHER" publisherparam ":" mailto CRLF
publisherparam =  *(
                    ; the following is optional,
                    ; but MUST NOT occur more than once

                    (";" cnparam ) / (";" nsrefparam ) /
                    (";" skiroleparam) / (";" altrepparam) /

                    ; the following is optional,
                    ; and MAY occur more than once

                    (";" xparam)
                  )

```

Example: The following are examples of this property:

```
PUBLISHER:mailto:info@timeout.co.uk
```

[6.7.2](#) SkiCal Version

Property Name:SKICALVER

Property Name:SKICALVER

Purpose: The inclusion of this property in an iCalendar object indicates the presence of SkiCal extensions. At the same time this property specifies the identifier corresponding to the highest version number or the minimum and maximum range of the SkiCal specification that is required in order to interpret the SkiCal extensions.

Value Type: TEXT

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component. This property MUST be specified by an iCalendar object containing any of the SkiCal extensions defined in this memo, but MAY only be specified once.

Description: A value of "1.0" corresponds to this memo.

Format Definition: The property is defined by the following notation:

```
SkiCalver      = "SKICALVER" SkiCalverparam ":" vervalue CRLF

SkiCalverparam = *(";" xparam)

vervalue       = "1.0"           ;This memo
                  / maxver
                  / (minver ";" maxver)

minver         = <A IANA registered SkiCal version identifier>

; Minimum SkiCal version needed to parse the SkiCal extensions
; in the iCalendar object

maxver         = <A IANA registered SkiCal version identifier>

; Maximum SkiCal version needed to parse the SkiCal extensions
; in the iCalendar object
```

Example: The following is an example of this property:

```
SKICALVER:1.0
```

[6.7.3](#) Namespace

Property Name: NAMESPACE

Purpose: Designates a URL containing a list of values and assigns a prefix as a shorthand pointer to that URL.

Value Type: URI

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or "VOPTIME" calendar component.

Description: For many of the properties and property parameters of this note, it is recommended that text values be chosen from authoritative lists. This property defines a method for the identification and location of such a list, but it does not define the syntax that such a list might employ. The inclusion of a NAMESPACE property in a calendar component does not imply that a SkiCal parser must be able to access such a list.

Format Definition: The property is defined by the following notation:

```
namespace      = "NAMESPACE" namespaceparam ":" uri CRLF
namespaceparam = ";" "PREFIX" "=" prefix
prefix         = text

                ; the following is optional,
                ; but MUST NOT occur more than once

                (";" languageparam ) /

                ; the following is optional,
                ; and MAY occur more than once

                (";" xparam)

                )
```

Example: The following are examples of this property:

```
NAMESPACE;PREFIX=SIS:"http://www.stockholmtown.se/placenames.html"
NAMESPACE;PREFIX=A:"http://www.valuerepresentations.org/values.html"
NAMESPACE;PREFIX=COM:"http://www.interestedparties.org/
  composers/clasical.html"
NAMESPACE;PREFIX=TO:"http://www.timeout.com/profiles/timespenders.html"
```

[6.7.4](#) Open Times

Property Name: OPTIMES

Purpose: Defines an OPTIMESSET and assigns an id value for that set.

Value Type: optimelist

Property Parameters: Non-standard property parameters can be specified on this property.

Conformance: This property CAN be specified within a "VEVENT" or

"VOPTIME" calendar component.

Description: .

Format Definition: The property is defined by the following notation:

```
optimes      = "OPTIMES" optimesparam ":" OPTIMESSET CRLF
```

```
optimesparam = ";" "ID" "=" text
```

; the OPTIMESSET is defined as a value type in beginning of this memo

```
    ; the following is optional,
    ; and MAY occur more than once
    (";" altrepparam) / (";" itemparam ) /
    (";" nsrefparam ) / (";" xparam)

    )
```

Example: The following is an example of this property:

```
OPTIMES:<OPTIMESSET ID="DEM012"><OPTERM
state="OPEN" range="20030225T15300Z/20030225T16300Z"/>
</OPTIMESSET>
```

the OPTIMESSET follows a uniform logical model. The six value types can be thought of as containers of date-time values. There is a hierarchal order for these containers, related to the significance of the date-time units running from centuries down to seconds. This sort of ordering is often referred to as the "Russian doll" model.

OPTERM is the only container that can declare 4-digit year information in its range and it is at the top of the hierarchy. An OPTERM value type can contain any of the other OPTIMESSET value types, though not another OPTERM. At the bottom of the hierarchy comes OPSECONDS, which can declare seconds and fractions of seconds as its range value, and can contain no other value-type. This gives us six possible generations of containers; OPTERMS holding OPSEASONS holding OPDAYS holding OPHOURS holding OPMINUTES holding OPSECONDS. But is possible to skip any or all but one of these. So an OPTERM could contain an OPSECONDS container and nothing else or an OPMINUTES container could be the only member of an OPTIMESSET. When Parsing the OPTIMESSET

The following chart shows the possible contents for each OPTIMESET value type

	OPSEASONS	OPDAYS	OPHOURS	OPMINUTES	OPSECONDS
OPTERM	YES	YES	YES	YES	YES
OPSEASONS		YES	YES	YES	YES
OPDAYS			YES	YES	YES
OPHOURS				YES	YES
OPMINUTES					YES
OPSECONDS	contain no other value-type				

Each container has a root date-time range setting the limits for all values inside that container. For example an OPTERM container with a range of 20040101/20041231 can contain any number of lesser containers each with reoccurring datetime values, but an optimeset parser will only be concerned with date-times falling within the year 2004.

The OPTERM data value is unique insomuch as it is "anchored" to the era of the Gregorian Calendar, Julian Date system or Network Time Protocol. It does not reoccur even though several OPTERM values may occur as siblings in an optimese).

What sort of information does the OPTIMESET represent and how is it calculated?

For each optimeset, individual containers at the bottom of the heirarchy are calculated first and then all containers are matched against each other. These calculations result in one period of time in which one (and only one) of three conditional states can be derived at at any given moment. These three states are; TRUE, FALSE, and UNDETERMINED.

In the OPTIMESET logical model all times are UNDETERMINED if not declared in an OPTIMESET.

The reoccurrence rules for the OPTIMESET members are as follows.

With the exception of OPTERM, the ranges of all OPTIMESET members will continue to reoccur indefinitely unless constrained.

The contents of a container are constrained by the range of that container.

We tend to naturally schedule reoccurences in sync with date-time

units. We choose for something to happen at the same time every day or the same day every week and so forth. In this memo such reoccurrences are referred to as "Date-time unit symmetric". They are the default recurrence frequency of this memo. They are as follows:

A value type of seconds will reoccur every minute

Minutes	hour
Hour	day
weekday	week
Monthday	month
Yearday	year
Season	year

But of course it is quite possible for things to reoccur with frequencies that do not naturally fall into the patterns above. If for example a workshift was scheduled to be 6 days of work followed by 4 days of rest, the resulting 10 day cycle would not be symmetric with the seven day week date-time unit. We call such reoccurrences "Date-time unit asymmetric" and such frequencies are enabled with the help of the CYCLE attribute. Using CYCLE We can say for example that the recurrence range for a period of 0700/0900 hours is not days but rather a timespan of 22 hours - so when compared to a normal 24 hour daily schedule the first occurrence on the first day would be from 7-9 but on the second day 5 to 7 and 3 to 5 on the third and so forth. We can also use CYCLE to indicate date-time symmetric ranges that are multiples of date-time units - such as a cycle of 7 Years.

Let us say that a OPSEASONS container held two OPDAYS containers without children. With the container-logic attribute of the OPSEASONS an operator is chosen for combining the two OPDAYS containers. The operators are AND, OR, XOR. For example if the value of one opday was "TU,TH" and the other moday "05".

7. Security considerations

Anybody could produce a SkiCal compliant file containing false information. Calendar publishers will need to exercise caution, or they may end up publishing invalid information. Security can be achieved either by choosing to index SkiCal files only from trusted servers, or by employing a moderator who can correct or refuse corrupt information. Nobody should consider information from non-encrypted SkiCal files 100% reliable, just as nobody SHOULD blindly trust printed advertisements or email.

SkiSource organizers and publishers should be aware of legal implications from spreading personal information in electronic media.

8. Internationalisation and localisation

The same Internationalization considerations apply as in all iCalendar applications. See [RFC-2445 section 2.3](#) [3].

9. Communication protocol

The definitive method for interchanging SKiCal data between directories/calendars will probably be an extension to the Calendar Access Protocol CAP [4]. Since, as of this writing, CAP not yet published as an RFC, the process of extending it has not begun. Meanwhile, a simplistic approach is being used to synchronize existing SKiCal databases over HTTP.

Typically an organization wants to copy all SKiCal data from certain SKiCal databases. In our simplistic solution we have two methods for this:

1. SKiCal files are stored in a web accessible directory (which is basically a webpage with links to .ics files). All files are fetched every time a synchronization needs to be made, they are parsed and all objects with a CREATED or LAST-MODIFIED value newer than the time of the previous synchronization are copied into the database. (Either automatically, or after review by an editor.)
2. A cgi program accepting one parameter, named 'since', returns a SKiCal file containing all SKiCal objects having a CREATED or LAST-MODIFIED value newer than local time 00:00:01 at the date indicated by the 'since' parameter. The format of the 'since' parameter is YYYY-MM-DD. (Eg. 2001-09-18 for September 18th 2001.)

Obviously these methods are not economic, neither in terms of bandwidth usage or processing power. The filtering of SKiCal objects is left to the application since there is no way to limit your selection. You might for example want to get all SKiCal objects related to "sports". Such selection mechanisms will appear in a later specification.

In order to facilitate the creation of intelligent SKiCal applications, though, it is RECOMMENDED that cgi export programs also implement the 'skuid' parameter. A call (HTTP GET) to the cgi program with the 'skuid' value set should return a single SKiCal object identified by that SKUID value, if there is such an object in the database. A response other than a valid SKiCal file from the cgi program should be interpreted as "no such object".

10. Choosing values from lists

It is RECOMMENDED that text values be chosen from "authoritative naming lists" whenever possible. Doing this, the publisher will increase the level of machine readability and thus increase the accumulated global value of all iCalendar/SkiCal objects. It is expected that such lists will become widely available and accessible online, possibly in the RDF [[11](#)] or XML-Schema format.

11. Examples

The following is an example SkiCal file, describing an actual real world SkiSource as published in the Washington Post and at the web site of the National Chamber Orchestra:

```
BEGIN:VCALENDAR
VERSION:2.0
SKICALVER:1.0
PROPID:-//HandGenerated/SkiCal//NONSGML v1.0//EN
BEGIN:VEVENT  UID:e098h99@washingtonpost.com
SKUID:kj08988b@nationalchamberorch.org
CATEGORIES:music,concert,classical,symphony
CREATED:19991125
DTSTAMP:19991125T110309Z
SEQUENCE:1
LAST-MODIFIED:19991125T110309Z
SUMMARY:Handel's "Messiah" featuring the National Chamber Orchestra
TITLE:Messiah
DTSTART:19991217T200000
RRULE:FREQ=DAILY;INTERVAL=1;COUNT=2
VENUE:Indoors
PERSONS;SKIROLE="conductor":Takao Kanayama
PERSONS;SKIROLE="orchestra":National Symphony Orchestra
PERSONS;SKIROLE="soloist":Heidi Grant Murphy
PERSONS;SKIROLE="soloist":Mary Ann McCormick
PERSONS;SKIROLE="soloist":Eric Owens
PERSONS;SKIROLE="choir":Cantate Chamber Singers
PERSONS;SKIROLE="choir director":Robert Shafer

PERSONS;SKIROLE="creator":G.F.Handel
PRICE;PRXITEM="SFT:Far side";CURRENCY=USD:17
PRICE;PRXITEM="SFT:Side section";CURRENCY=USD:24
PRICE;PRXITEM="SFT:Center section";CURRENCY=USD:31
PRICE;ITEM="Discounted subscriptions available":
PAYMETHOD:Check
PAYMETHOD:Visa
PAYMETHOD:Mastercard
PAYMETHOD:Amercan Express
BOOKINGS:Telephone: 301/762-8580  BOOKINGS:Fax: 301-762-8581
PROHIBITED:Children under five - no exceptions!
URL:http://yp.washingtonpost.com/E/E/WASDC/0000/40/17/cs1.html
WHURL:http://www.nationalchamberorch.org/seasonnext.html
PLACENAME:F. Scott Fitzgerald Theatre
LOCATION:F. Scott Fitzgerald Theatre, 603 Edmonton Dr., Rockville,
Maryland, USA
DIRECTIONS;ALTREP="http://www.parkers-place.net/rmt/fscotdir.html":
The theatre is located in Rockville Civic Center Park, Baltimore
```


Road and Edmonton Drive. Call 301-309-3007 for directions.

ACCESS;TYPE=wheelchair-ramps:TRUE

DESCRIPTION;LANGUAGE=en:Handel's classic "Messiah" performance by the National Symphony Orchestra under Takao Kanayama, soprano Heidi Grant Murphy, mezzo-soprano Mary Ann McCormick, bass Eric Owens and the Cantate Chamber Singers directed by Robert Shafer. This concert is a popular tradition.

ORGANIZER;CN="National Chamber Orchestra":MAILTO:nationalchamberorchestra@juno.com

CONTROL;CN="National Chamber Orchestra":MAILTO:nationalchamberorchestra@juno.com

PUBLISHER;CN="Washington Post":MAILTO:info@washingtonpost.com

CONTACT;CN="Christine Carlin,Administrator":MAILTO:nationalchamberorchestra@juno.com

PROMO:[http://www.nationalchamberorch.org/review"of"1st.html](http://www.nationalchamberorch.org/review)

PROMO:Relax on Friday or Saturday evenings in the elegant F. Scott Fitzgerald Theatre concert hall, nestled among the trees and gardens at the Rockville Civic Center Park in Rockville, Maryland.

END:VEVENT END:VCALENDAR

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[Appendix A](#). Acknowledgements

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