
REPRESENTATION

****Zeit** — absolute period of time

DESCRIPTION

The ****Zeit** representation is used to represent spans of time, such as the life-span of a composer, or the chronology of a rehearsal. The syntax for ****Zeit** is nearly identical to the ****date** representation. Since ****Zeit** represents a span of time, two date tokens must be specified and separated by a dash (-). For example, the ****Zeit** data token 1770/-1827/ represents the period from 1770 to 1827.

The ****Zeit** representation includes all of the features of ****date** for signifying approximation (^), uncertainty (?), approximate value (x), uncertain value (z), as well as between-range (^), either-or (|), prior (<) and after (>) boundaries. Either one or both of the dates specified in a ****Zeit** data token may encode complex degrees of approximation or uncertainty.

Conceptually, ****Zeit** data tokens consist of two ****date** “sub-tokens.” Zeit tokens are encoded according to the following basic syntax:

year/month/day/hour:minute:second.decimal-year/month/day/hour:minute:second.decimal

The data tokens making-up the ****Zeit** information may be encoded in full, or may consist of isolated elements or parts. The following table shows the most succinct ways of encoding single date values within sub-tokens in ****Zeit**:

.11	eleven one-hundredths of a second
11	11th second
11:	11th minute
11::	11 o'clock
11/	A.D. 11
/11	November
//11	11th day of the month

*Examples of **date** sub-components*

Notice that if a single numerical value appears, it is interpreted as *seconds*; if a single value appears followed by a slash, it is interpreted as a *year*; if a single value appears followed by a colon, it is interpreted as a *minutes*. Days and hours require two leading or two trailing delimiters respectively. In general, abbreviated forms of date sub-tokens tend to favor the two extremes of time: seconds and years. These are the time frames that are typically of greatest interest to music scholars.

The ****Zeit** representation makes use of the Gregorian calendar and the 24-hour clock. Dates prior to the year 1 A.D. can be specified by prepending a minus sign to the year.

The ****Zeit** representation provides three distinct means for representing approximate moments. It also provides two independent means for representing uncertainty, as well as mechanisms for representing time boundaries (prior to ...; after ...). For the appropriate representation syntax refer to ****date** (2).

FILE TYPE

It is recommended that files containing predominantly ****Zeit** data should be given names with the distinguishing '.zt' extension.

SIGNIFIERS

The following table summarizes the ****Zeit** mappings of signifiers and signifieds.

-	sub-token separator (from-to); (must appear in each **Zeit data token)
0-9	decimal values
@	year B.C. rather than A.D.
/	year-month, month-day and day-hour delimiter
:	hour-minute and minute-second delimiter
.	fractional second delimiter; null token
?	date uncertain
z	value uncertain
~	date approximate
x	value approximate
<	sometime prior to
>	sometime after
^	"between" conjunction
	"or" conjunction

*Summary of ****Zeit** Signifiers*

EXAMPLES

Several examples of ****Zeit** data tokens are identified below:

**Zeit tokens	meaning
1939/-1945/	From 1939 to 1945.
1817/06/02/-1817/6/15	From June 2nd to 15th, 1817.
1817/6/02/-1817/06/15	From June 2nd to 15th, 1817.
///10::-//11::	From 10 AM to 11 AM.
10::-11::	From 10 AM to 11 AM.
~10::-~11::	From approximately 10 AM to approximately 11 AM.
>22::-<23::	From sometime after 10 PM to sometime before 11 PM.
:11:51-:12:35	From 11 minutes 51 seconds to 12 minutes 35 seconds.
.001-.008	From 1 millisecond to 8 milliseconds.
23.8-41.3	From 23.8 seconds to 41.3 seconds.
//12/31-//1/1	From December 31st to New Years' Day.
<?1231///-1283/3/9	From before perhaps 1231 to March 9th 1283.
<1724/2//1724/4z/2	From before Feb. 1724 to April (?) 2nd 1724.
1848/ 1849/-1851/	From 1848 or 1849 to 1851.
/5/9/^/5/11/-//8/23	Starting sometime between May 9th and 11th ending August 23rd.

*Examples of **Zeit Tokens*

The following examples illustrate the use of the ****Zeit** representation:

**Zeit	**maker
?1644/-1737/12/18	Stradivari, Antonio
1794/4/9-1881/11/25	Boehm, Theobald
1797/2/15-1871/2/7	Steinweg, Heinrich
1814/11/6-1894/2/4	Sax, Adolphe
*-	*-

**Zeit	**recording log
/4/9:20:18-/4/9:20:20	Aria - Take #1
/4/9:20:20-/4/9:20:22	Aria - Take #2
/4/9:20:23-/4/9:20:25	Aria - Take #3
/4/9:20:25-/4/9:20:27	Var.1 - Take #1
*-	*-

**Zeit	**section
0:0-0:23	Introduction
0:23-1:58	Exposition
1:58.3-3:22	Development
3:22-4:51	Recapitulation
4:52-5:04	Coda
*-	*-

**Zeit	**style
~1450/-~1600/	Renaissance ~-
~1600/-~1750/	Baroque
~1775/-~1825/	Classicism
~1800/-~1900/	Romanticism
*-	*-

PERTINENT COMMANDS

Currently, no special-purpose Humdrum commands produce ****Zeit** as output, or process ****Zeit** encoded data as input.

TANDEM INTERPRETATIONS

The following tandem interpretations can be used in conjunction with ****Zeit**:

meter signatures	*M6/8
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*Tandem interpretations for ****Zeit***

SEE ALSO

****date** (2), ****dur** (2), ****metpos** (2), ****ordo** (2), ****recip** (2), ****takt** (2), ****time** (2)