

Timezones are Hard

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Purpose

- We've had a number of timezone-related bugs recently.
- There are some things we've been able to get away with but can't anymore, because mobile (and other API) clients have their own notion of local time.
- Mostly just a brief overview of timezones in general, some Meetup-specific bits at the end.

Intro

Timezones are a mapping from UTC to the time that people have on their wristwatches.

We will not cover deciding what UTC is.

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- but what about Indiana?
- we need a database...

Olson Database

- one of the greatest works of nerdery ever!
- a.k.a. “tzdata”, “zoneinfo”
- now hosted by IANA
- used by all reasonable Unixes (incl. OS X)
- Java ships with its own copy, doesn't use the host OS
- JODA Time does something, I haven't bothered to figure out exactly what

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- points, not regions!

Pop Quiz, Hotshot

How many time zones are there in the United States?

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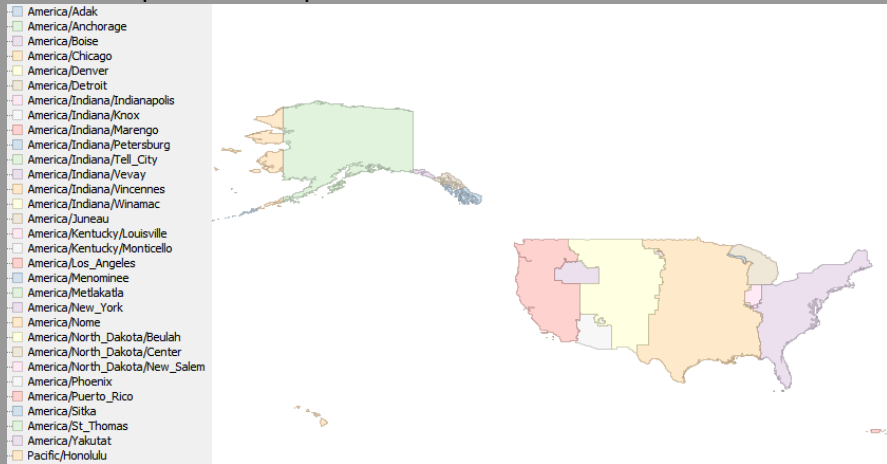
How many time zones are there in the United States?

30!

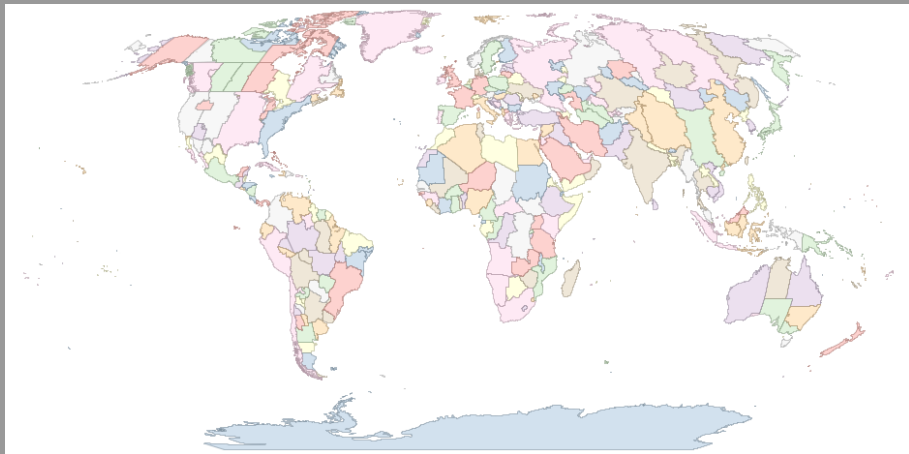
America/New_York	Eastern Time
America/Detroit	Eastern Time - Michigan - most locations
America/Kentucky/Louisville	Eastern Time - Kentucky - Louisville area
America/Kentucky/Monticello	Eastern Time - Kentucky - Wayne County
America/Indiana/Indianapolis	Eastern Time - Indiana - most locations
America/Indiana/Vincennes	Eastern Time - Indiana - Daviess, Dubois, Knox & Martin Counties
America/Indiana/Winamac	Eastern Time - Indiana - Pulaski County
America/Indiana/Marengo	Eastern Time - Indiana - Crawford County
America/Indiana/Petersburg	Eastern Time - Indiana - Pike County
America/Indiana/Vevay	Eastern Time - Indiana - Switzerland County
America/Chicago	Central Time
America/Indiana/Tell_City	Central Time - Indiana - Perry County
America/Indiana/Knox	Central Time - Indiana - Starke County
America/Menominee	Central Time - Michigan - Dickinson, Gogebic, Iron & Menominee Counties
America/North_Dakota/Center	Central Time - North Dakota - Oliver County
America/North_Dakota/New_Salem	Central Time - North Dakota - Morton County (except Mandan area)
America/North_Dakota/Beulah	Central Time - North Dakota - Mercer County
America/Denver	Mountain Time
America/Boise	Mountain Time - south Idaho & east Oregon
America/Shiprock	Mountain Time - Navajo
America/Phoenix	Mountain Standard Time - Arizona
America/Los_Angeles	Pacific Time
America/Anchorage	Alaska Time
America/Juneau	Alaska Time - Alaska panhandle
America/Sitka	Alaska Time - southeast Alaska panhandle
America/Yakutat	Alaska Time - Alaska panhandle neck
America/Nome	Alaska Time - west Alaska
America/Adak	Aleutian Islands
America/Metlakatla	Metlakatla Time - Annette Island
Pacific/Honolulu	Hawaii

Regions

Eric Muller produces shapefiles:



The World



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- Some parts of the world, we have the wrong timezone for. (Bug #34392)
- We have no procedure for making changes when timezones split.
- We have no procedure for making changes when timezones change their rules (e.g., Israel).