

# Extend TimeZoneName Option Proposal for Stage 1

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Slide: [https://docs.google.com/presentation/d/1G8XTK4tjzXxJAs6GpZvrd6SjxL40h\\_fgrEq9CN6jDPw](https://docs.google.com/presentation/d/1G8XTK4tjzXxJAs6GpZvrd6SjxL40h_fgrEq9CN6jDPw)  
Repo: <https://github.com/FrankYFTang/proposal-intl-extend-timezonename/>

# Motivation

Extend the `timeZoneName` option in `Intl.DateTimeFormat` object to support more formatted options.

Add four new values to TimeZoneName option in Intl.DateTimeFormat: “short”, “long”, “shortGMT”, “longGMT”, “shortWall”, “longWall”

## 1 DateTimeFormat Objects

### 1.1 Abstract Operations For DateTimeFormat Objects

Several DateTimeFormat algorithms use values from the following table, which provides internal slots, property names and allowable the components of date and time formats:

Table 1: Components of date and time formats

Internal Slot	Property	Values
[[Weekday]]	"weekday"	"narrow", "short", "long"
[[Era]]	"era"	"narrow", "short", "long"
[[Year]]	"year"	"2-digit", "numeric"
[[Month]]	"month"	"2-digit", "numeric", "narrow", "short", "long"
[[Day]]	"day"	"2-digit", "numeric"
[[Hour]]	"hour"	"2-digit", "numeric"
[[Minute]]	"minute"	"2-digit", "numeric"
[[Second]]	"second"	"2-digit", "numeric"
[[TimeZoneName]]	"timeZoneName"	"short", "long", "shortGMT", "longGMT", "shortWall", "longWall"

## Sample Usage in English Locale

```
d8> let timeZoneNames = ["short", "long",  
"shortGMT", "longGMT", "shortWall", "longWall"];
```

```
d8> timeZoneNames.forEach(function(timeZoneName)  
{ print((new Date()).toLocaleTimeString("en",  
{timeZoneName}))});
```

```
9:27:14 AM PST
```

```
9:27:14 AM Pacific Standard Time
```

```
9:27:14 AM GMT-8
```

```
9:27:14 AM GMT-08:00
```

```
9:27:14 AM PT
```

```
9:27:14 AM Pacific Time
```

# Examples of "Wall Time" Usage



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## Enphase Energy Announces 2020 Financial Results Tues

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January 25, 2021 08:00 ET | Source: Enphase Energy, Inc.

FREMONT, Calif., Jan. 25, 2021 (GLOBE NEWSWIRE) – **Enphase Energy**, a leading provider of microinverter-based solar-plus-storage systems, announced today that it will discuss its fourth quarter and full year 2020 financial results for the period ending December 31, 2020, on Tuesday, February 9, 2021, at 4:30 p.m. Eastern Time. The call will be held on a recorded version of the call webcast at [investor.enphase.com](http://investor.enphase.com), and a recorded version of the call will be available on the website at [investor.enphase.com](http://investor.enphase.com).

**What:** Enphase Energy's Fourth Quarter 2020 Financial Results

**Date:** Tuesday, Feb. 9, 2021

**Time:** 4:30 p.m. Eastern Time

## Sample Usage in Traditional Chinese Locale (zh-CN)

```
d8> let timeZoneNames = ["short", "long",  
"shortGMT", "longGMT", "shortWall", "longWall"];
```

```
d8> timeZoneNames.forEach(function(timeZoneName) {  
  print((new Date()).toLocaleTimeString("zh-Hant",  
    {timeZoneName}));  
});
```

```
上午9:27:27 [PST]
```

```
上午9:27:27 [太平洋標準時間]
```

```
上午9:27:27 [GMT-8]
```

```
上午9:27:27 [GMT-08:00]
```

```
上午9:27:27 [PT]
```

```
上午9:27:27 [太平洋時間]
```

# Concerns about Data Size Increase

- **shortGMT & longGMT:**
  - # of items in 476 locales: 263
  - Total Bytes in UTF8: 1,826 bytes
  - Compressed Size: 392 bytes
- **shortWall:**
  - # of items in 476 locales: 332
  - Total Bytes in UTF8: 1,719 bytes
  - Compressed Size: 311 bytes
- **longWall:**
  - # of items in 476 locales: 10,047
  - Total Bytes in UTF8: 278,103 bytes
  - Compressed Size: 69,526 bytes

**Note:** Several **other possible values** of `timeZoneName` were **removed** from earlier proposal after we examined the size impact during Stage 0

# ECMA402 2021-01-14 Monthly Meeting

Agree to bring to TC39 for Stage 1 advancement discussion.

## Acceptance Signifies:

- Stage 1: “The committee expects to devote time to examining the problem space, solutions and cross-cutting concerns”



# Entrance Criteria For Stage 1

- Identified “champion” who will advance the addition: **DONE-@FrankYFTang**
- Prose outlining the problem or need and the general shape of a solution **DONE**
- Illustrative examples of usage **DONE**
- High-level API **DONE**
- Discussion of key algorithms, abstractions and semantics **DONE**
- Identification of potential “cross-cutting” concerns and implementation challenges/complexity **DONE**
- A publicly available repository for the proposal that captures the above requirements: **DONE**

<https://github.com/FrankYFTang/proposal-intl-extend-timezonename/>

Requesting the Committee  
Approval for advancement to  
Stage 1