

Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document
Title: Proposal to encode four half star symbols
Source: Andrew West
Status: Individual Contribution
Action: For consideration by JTC1/SC2/WG2 and UTC
Date: 2016-07-11

1. Introduction

The Unicode and ISO/IEC 10646 standards include two star symbols which are commonly used in star ratings (usually one through five stars, indicating popularity or satisfaction):

- U+2605 ★ BLACK STAR
- U+2606 ☆ WHITE STAR

When averaging users' star ratings it is common to round to the nearest half star, and display the average star rating as one or more stars followed by zero or one half star or half-filled star. Some internet sites also allow half stars for users' individual ratings of products or services, but this is less common than for average ratings. There are currently no Unicode characters for such half star or half-filled star symbols, and despite being discussed at length on the Unicode mailing list several times, no proposal has previously been submitted. For background discussion see these threads on the Unicode mailing list:

- Jörg Knappen, "Missing geometric shapes" on 6 Nov 2012 (<http://www.unicode.org/mail-arch/unicode-ml/y2012-m11/0008.html>)
- Ken Shirriff, "Adding half-star to Unicode?" on 23 June 2016 (<http://www.unicode.org/mail-arch/unicode-ml/y2016-m06/0094.html>)

A star rating is normally shown on a scale of three, four, five or ten stars (five stars being most common), with filled and half-filled stars representing the rating (e.g. ★★★☆☆ represents 3½ stars out of 5). In LTR contexts, the half star is normally displayed as a white star with the left half filled in like ★ (see Figs. 1 through 5 below). In RTL contexts, such as Hebrew or Arabic text, half stars are normally displayed as a white star with the right half filled in like ☆ (see Fig. 7). Other presentations are also possible (e.g. Fig. 6 and Fig. 11).

Less commonly, separate left half-star  and right half-star  symbols may be used in ratings that are not right- or left-justified with unfilled stars (e.g.  represents 3½ stars). See Fig. 8 and Fig. 9 for examples.

A few web sites have average star ratings that include fractional stars in addition to half stars (see Fig. 10). This usage is not so widespread, and other fractional star symbols are not included in this proposal.

It is also possible that half stars or half-filled stars are used in vertical orientation, such as with vertically-written Japanese or Mongolian text, in which case the stars would be halved along the horizontal axis (e.g.  and ). However, I have not found any examples of this yet, and so horizontally-halved stars are not included in this proposal.

Table 1: Proposed Half Star Characters

Code Point	Glyph	Character Name
1F7D9		LEFT HALF BLACK STAR
1F7DA		RIGHT HALF BLACK STAR
1F7DB		STAR WITH LEFT HALF BLACK
1F7DC		STAR WITH RIGHT HALF BLACK

Fig. 1: Advertisement in *The Times*, 2 July 2016



Monarch

Don't **LEAVE** it too late
to get away this summer

Hurry
offer ends
Friday 8th July

Over 10,000 seats at

plus thousands of holidays from

£35* | £245

per person†

Including flights & holidays to Alicante, Faro & Almeria

For great service book now at Monarch.co.uk

feefo Over 450,000 reviews
Service Rating: ★★★★★

Fig. 2: Advertisement in the Metro, 29 July 2016

£14-£4

METRO Reader Offer

TRY THE RAZOR THAT'S CHANGING SHAVING

GQ
"A modern essential"

Esquire
"The days of the beard are numbered"

The Telegraph
"everything you need for a perfect shave"

WINNER
ShortList
MEN'S GROOMING AWARDS
2015
HOUSE OF BRAVES
Razor of the Year

f
★★★★★
4.6/5.0 From 500+ reviews

CORNERSTONE.CO.UK/METRO10
FIND OUT MORE WITH £10 OFF

Cornerstone®

Fig. 3: Review for Reading Museum on Google Maps

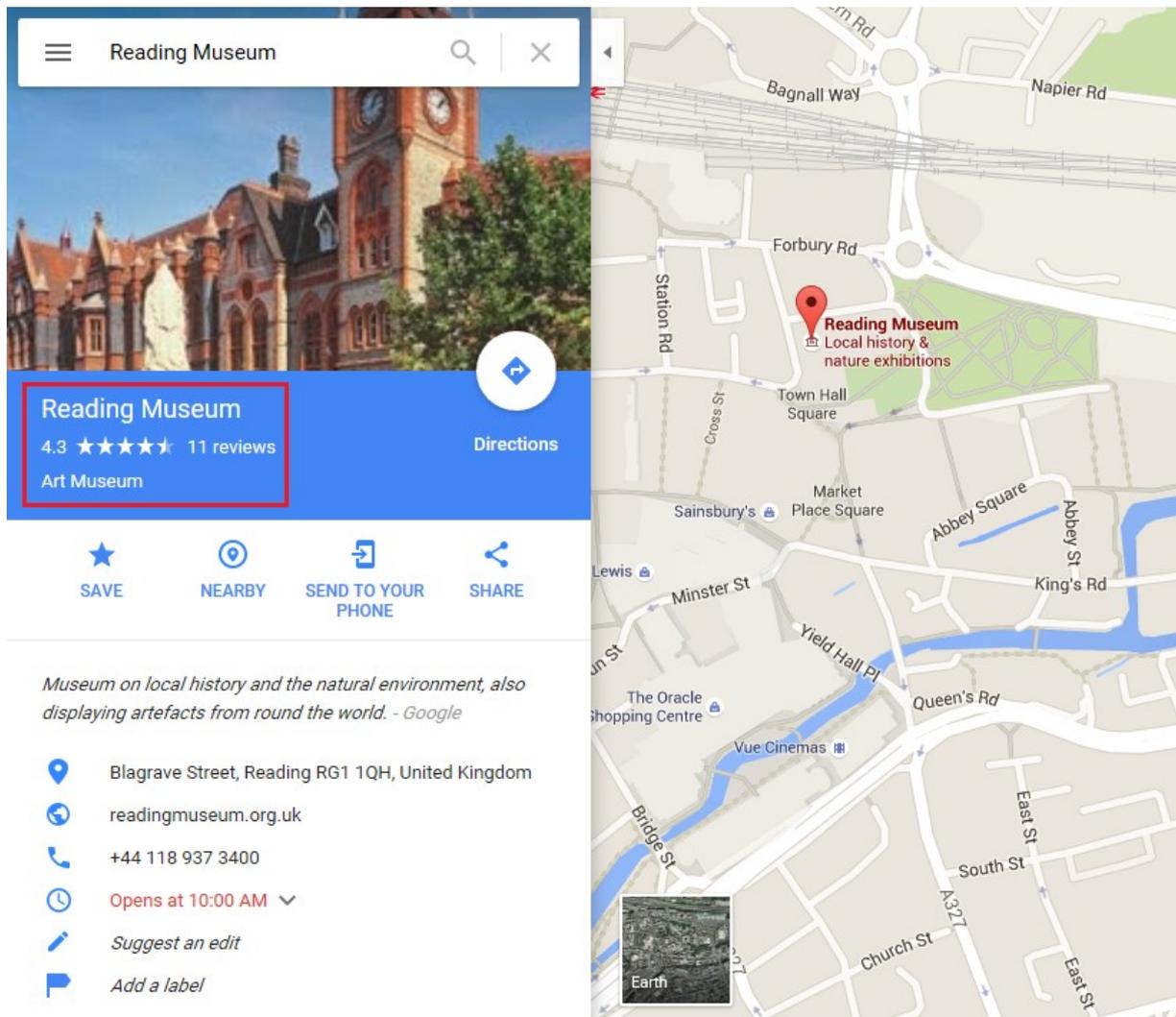


Fig. 4: Ratings for London Restaurants on Google Maps

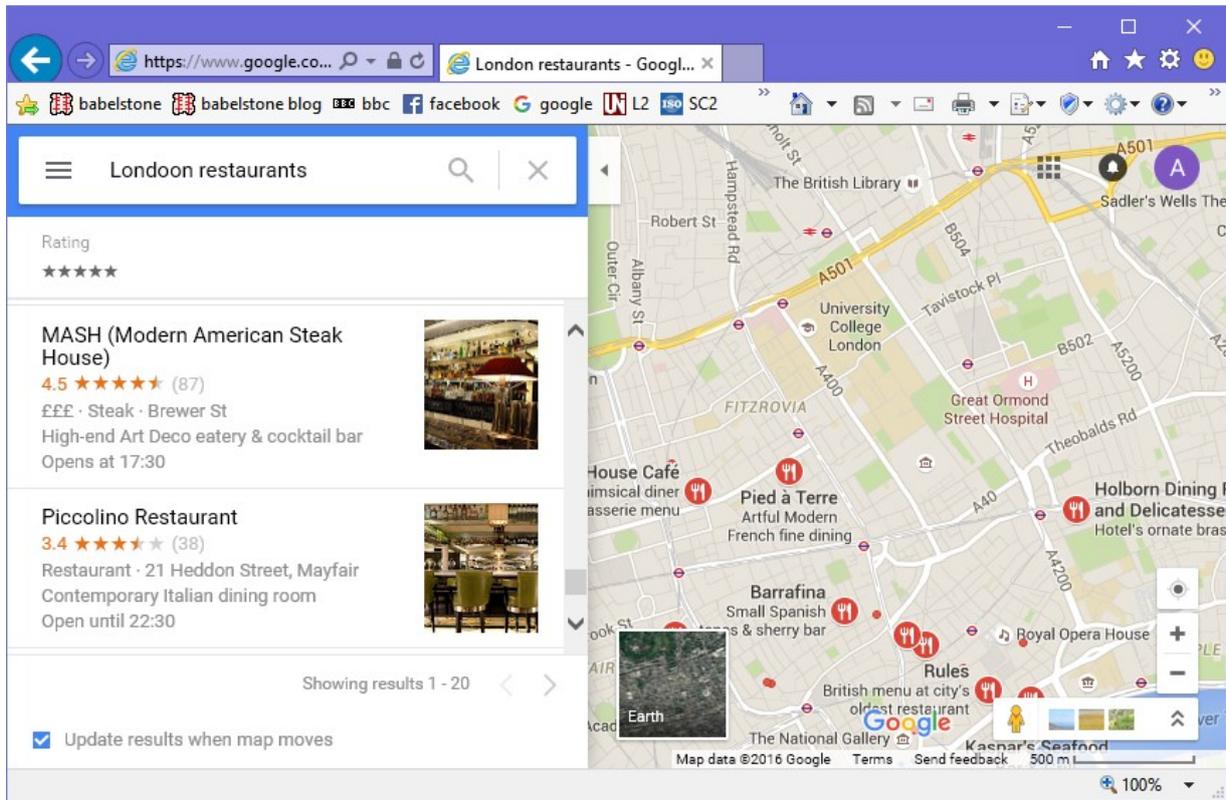


Fig. 5: Movie Reviews at www.rollingstone.com



JUNE 24, 2016



Independence Day: Resurgence

Aliens attack yet again in this so-so sequel to the 1996 sci-fi blockbuster



JUNE 23, 2016



Free State of Jones

Matthew McConaughey wants to free the slaves or die tryin' in this civics lesson of a Civil War drama



JUNE 23, 2016



The Shallows

Blake Lively finds herself stranded in shark-infested waters in this summer-movie nailbiter

Fig. 6: Yelp London Arts & Entertainment Ratings

Best of Yelp: London

 Food	<h3>Arts & Entertainment See More</h3> <ol style="list-style-type: none">1. The British Museum ★★★★☆ 743 reviews  And of course there's THE Rosetta Stone which is pretty friggin fantastic.2. National Gallery ★★★★☆ 364 reviews  And yes, I also enjoy Van Gogh, Gaughin and Cezanne.3. Royal Albert Hall ★★★★☆ 202 reviews  The acoustics are incredible as is the giant organ built into the back wall.4. V&A Museum ★★★★☆ 322 reviews  Stunning art work and sculptures and marble and exhibitions!5. The All England Lawn Tennis Club and Croquet Cl ★★★★☆ 69 reviews  The museum has a large selection of tennis memorabilia ranging from the first tennis ball, to vintage tennis outfits, clothing worn by today's
 Nightlife	
 Restaurants	
 Shopping	
 Sports & Leisure	
 Arts & Entertainment	
 Car & Motorcycle	
 Beauty & Spas	
 Education	
 Event Planning & Ev...	
 Health & Medical	
 Home Services	
 Local Services	
 More Categories	

Fig. 7: Advertisement in *Haaretz*, 2 November 2012



(Image posted to Unicode mailing list by Simon Montagu)

Fig. 8: “Pennsylvania Agencies Outperform National Average on New Home Health Star Ratings”, 2 January 2016

Quality of Patient Care Star Rating	Percent (approximate)
	2.5
	8.6
	23.4
	27.7
	21.3
	9
	5.4
	1.8

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Fig. 9: Expedia: San Jose Hotels Search

 <p>Today 25% off</p>	<p>Hotel Presidente - San Jose City Center, Costa Rica ★★☆☆</p> <p>San Jose Map 📍</p> <p>020 3564 4852 (Call cost)</p> <p>Expedia Rate ✓ Free Cancellation</p> <p>3 people booked this hotel in the last 48 hours</p> <p>Booked in the last 3 hours</p>	<p>Very good! 4.1/5 (806 reviews)</p> <p>4 nights from</p> <p>£379 £284</p> <p>Sale!</p>
 <p>Today 42% off</p>	<p>Country Inn & Suites By Carlson, San Jose Aeropuerto ★★☆☆</p> <p>Ciudad Cariari Map 📍</p> <p>020 3564 4852 (Call cost)</p> <p>Expedia Rate ✓ Free Cancellation</p> <p>5 people booked this hotel in the last 48 hours</p> <p>Booked in the last 5 hours</p>	<p>Very good! 4.0/5 (403 reviews)</p> <p>4 nights from</p> <p>£414 £240</p> <p>Sale!</p> <p>✓ Book Now, Pay Later</p>
	<p>Hotel El Portico ★★☆☆</p> <p>San Jose De La Montana Map 📍</p> <p>020 3564 4852 (Call cost)</p> <p>Expedia Rate</p>	<p>4 nights from</p> <p>We have 1 left at</p> <p>£230</p>

Fig. 10: Ratings of websites showing 7.4 and 9.6 stars

网站详情







名称: 人民网 (蒙古文版) 人气: 369503

网址: <http://mongol.people.com.cn/> 进入网站

人民网是世界十大报纸之一《人民日报》建设的以新闻为主的大型网上信息发布平台。

网站详情







名称: 草原雄鹰网 人气: 561025

网址: <http://www.burgud.com> 进入网站

草原雄鹰是运营多年的蒙古文门户网站。

Fig. 11: Australian Health Star Ratings on food products



2. Unicode Properties

```
1F7D9;LEFT HALF BLACK STAR;So;0;ON;;;;N;;;;;  
1F7DA;RIGHT HALF BLACK STAR;So;0;ON;;;;N;;;;;  
1F7DB;STAR WITH LEFT HALF BLACK;So;0;ON;;;;N;;;;;  
1F7DC;STAR WITH RIGHT HALF BLACK;So;0;ON;;;;N;;;;;
```

3. Proposal Summary Form

**SO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹**

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.
See also <http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title: Proposal to encode four half star symbols

2. Requester's name: Andrew West

3. Requester type (Member body/Liaison/Individual contribution): Individual contribution

4. Submission date: 2016-07-11

5. Requester's reference (if applicable): _____

6. Choose one of the following:

This is a complete proposal: YES

(or) More information will be provided later:

B. Technical – General

1. Choose one of the following:

a. This proposal is for a new script (set of characters): NO
Proposed name of script: _____

b. The proposal is for addition of character(s) to an existing block: YES
Name of the existing block: Geometric Shapes Extended

2. Number of characters in proposal: 4

3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary B.1-Specialized (small collection) B.2-Specialized (large collection)
 C-Major extinct D-Attested extinct E-Minor extinct
 F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usage symbols

4. Is a repertoire including character names provided? YES

a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document? YES

b. Are the character shapes attached in a legible form suitable for review? YES

5. Fonts related:

a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? Andrew West

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): Andrew West

6. References:

a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? YES

b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? YES

7. Special encoding issues:

Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? YES

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4102-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain	<i>N4719</i>	<i>YES</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	<i>Unicode mailing list</i>	<i>YES</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:		<i>NO</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:		<i>common</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:		<i>YES</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:		<i>NO</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?		<i>NO</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>NO</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>NO</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:		<i>NO</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:		<i>NO</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)		<i>NO</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:		<i>NO</i>