Proposal for Emoji: *2D BARCODE*

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1. Identification:
- *CLDR short name*: 2D barcode
- *CLDR keywords*: qr code | 2D code | matrix code

2. Images:

72 px   18 px   72 px   18 px

License - Image rights
The image has been created by the submitter and is free to use in conjunction with this proposal.

3. Category:
- *Category:* other-object
- *Sort location:* after 'identification 🚬⚰️🪦⚱️🗿🪧🪪🔳card'

Abstract
A *2D barcode*, also called *matrix code* or simply *2D code*, is a way to represent information two-dimensionally in a visual and machine-readable form. This kind of codes are very flexible: they can be applied to a wide range of both industrial and consumer applications, and they are changing the way we work and live.
Although purpose-made readers are commercially available, 2D barcodes can be scanned and decoded using a simple smartphone. As of today, they have been employed in a huge variety of contexts — museums, monuments and exhibitions use 2D codes to enrich the visiting experience, printed newspaper and magazines provide 2D codes for further online readings, companies use 2D barcodes for loyalty programs or for providing more information about a physical product, etc. The adoption of 2D barcodes has grown exponentially during the last two years: the COVID-19 pandemic has prompted reduced contact between service staff, customers and items difficult to effectively sanitize (such as restaurant menus, cash, etc). Most of the vaccination certificates released worldwide during the pandemic includes a 2D barcode, too.

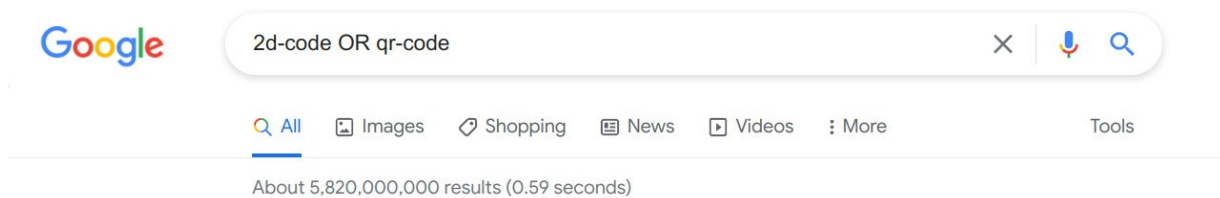## 4. Selection factors — Inclusion.

A. Compatibility
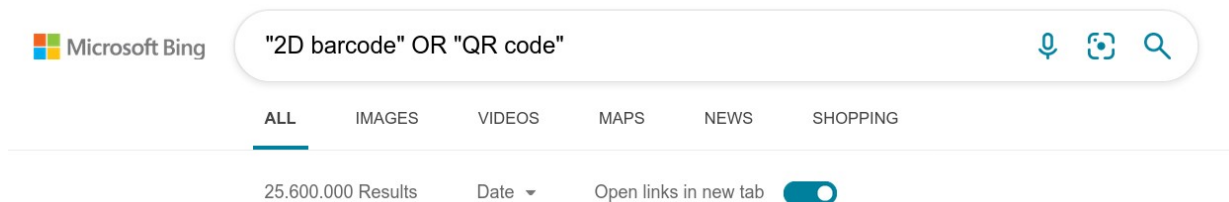n/a

B. Expected usage level
1. Frequency
The search results show below confirm that the usage frequency is high, that this is a global phenomenon and that there is a growing trend. As explained below in Section 6 , "QR Code" is informally used worldwide as a synonym for "2D barcodes": hence, the search results combine these two terms in order to show the actual popularity of bidimensional barcodes.
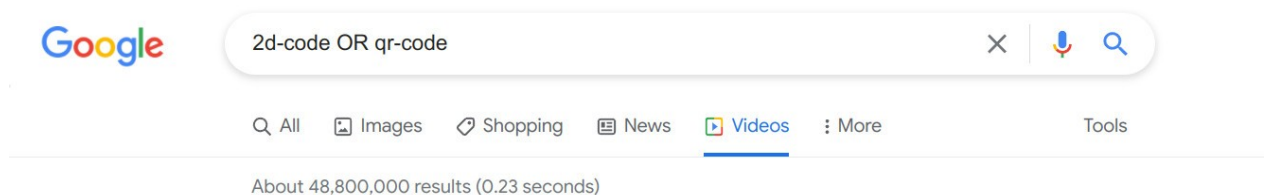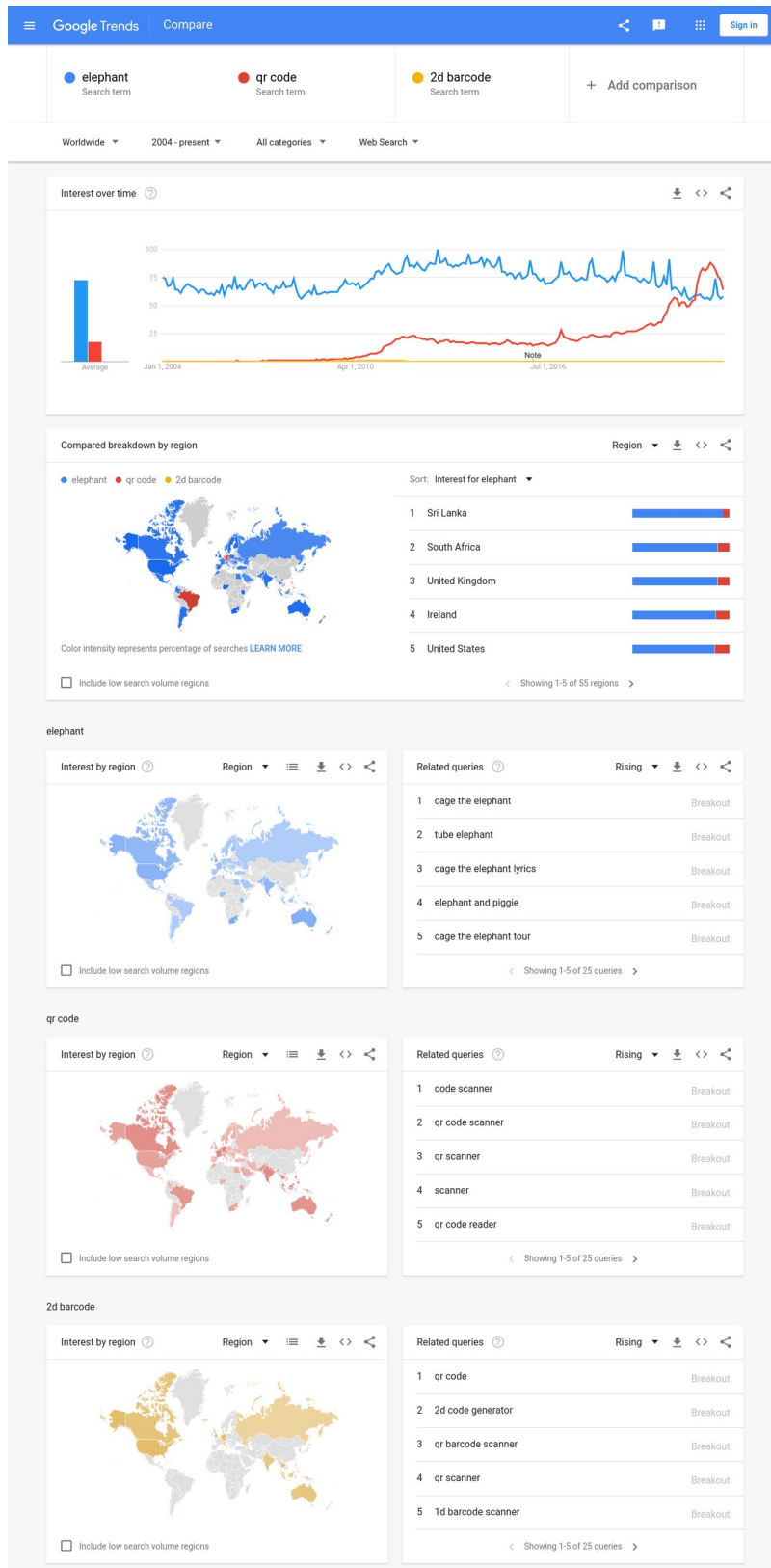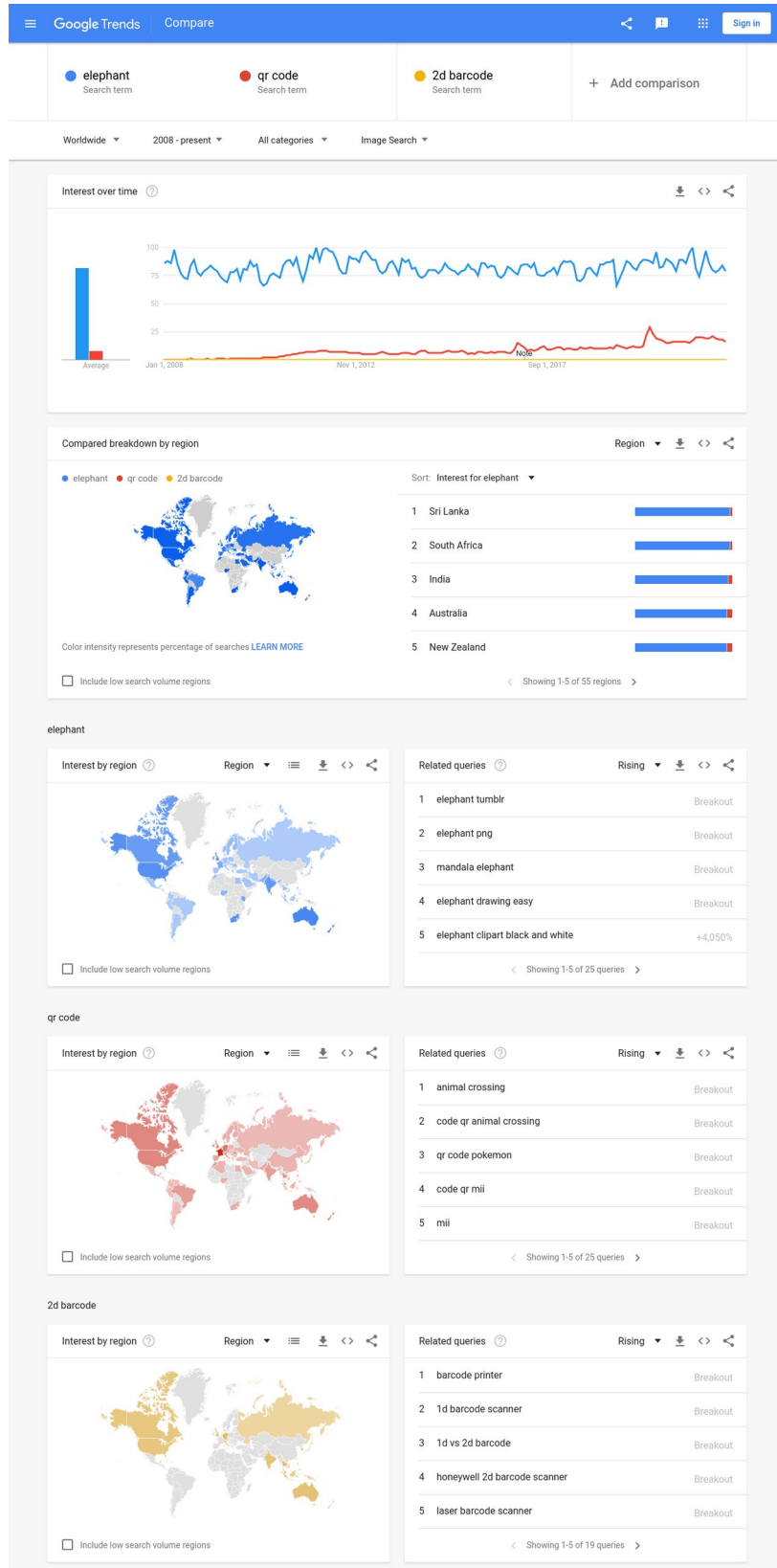
Google Search

Bing Search

Google Video Search

Google Trends: Web Search

Google Trends: Image Search

2. Multiple usages
n/a

3. Use in sequences

The proposed emoji can be used in sequences to complete many situations where 2D Barcodes are used today.

📱	▦	ℹ️ Scan the 2d barcode for more information
📱	▦	🎁 Scan the 2d barcode for a suprise
▦	🦠	Vaccination pass
🖨️	▦	✈️ Printable flight ticket
🎟️	▦	Digital admittance ticket

4. Breaking new ground
There are no similar symbols. This emoji would allow people to represent something that, at the moment, is not representable in any other way.

C. Distinctiveness
The 2D barcode symbol that I am proposing is brand new: it is not similar nor comparable to any symbol that is currently available. Moreover, the square shaped filled with black and white dots, apparently scattered randomly in a grid pattern, clearly identify a 2D barcode and cannot be confused with other objects.

D. Completeness
n/a

5. Selection factors — Exclusion

E. Petitions or "frequent requests"

n/a

F. Overly specific

As explained before, 2D barcodes are widespread and adopted worldwide. Moreover, their use is increasingly popular in many sectors: automotive industry, mobile payments, digital login, loyalty programs, vaccination certificates, restaurant ordering.

G. Open-ended
The 2D barcode is unique, non part a of a set of similar symbols.

H. Already representable

There are no other symbols remotely usable to convey the same meaning.

I. Logos, brands, other third-party IP rights, UI icons, signage, specific people, specific buildings and landmarks, deities

Although the name "QR Code" is a trademark, the usage of the proposed symbol for the 2D Barcode is an ISO standard and can be freely used and shared.

J. Transient

The barcode was been invented 70 years ago: 1-dimensional barcodes became commercially successful about 50 years ago and they are still used. 2D barcode are more recent; however, thanks to their advantages over 1D code, they are spreading much faster and they are siding (and replacing) 1D code. Hence, the usage of 2D barcodes is going to increase in the future, and they are here to stay for many decades.

K. Faulty comparison

n/a

L. Exact images

An exact image is not required. From a user perspective, all 2D Barcodes appear as a matrix of black and white dots apparently scattered randomly. Hence, an exact image of a specific 2D barcode is not required to convey the idea.

M. Region flags without code

n/a

N. Lack of required rights or license for images

The image can be used and reproduced freely.

O. Variations on direction

n/a

P. Includes text

The image does not include any written text. Actually, the proposed code embeds a machine-readable text ("0123456789"). However, if this is going to pose localization challenges, it would be possible to create a similar image with

some black and/or white dots in a different position. This would render the code technically incorrect and not machine-readable, hence not including any text, but the image would still represent a 2D barcode for all users.

6. Other information

Naming of Emoji

The most frequently used type of 2D barcodes is QR Code and, most of the time, QR Code is used colloquially as a synonym for 2D barcode. However, although the use of QR Code technology as described in the International Standard ISO/IEC 18004 is freely licensed, the name "QR Code" itself is a registered trademark. Moreover, other types of standard and free matrix codes are used nowadays: among them, Aztec Code and Data Matrix are probably the most known, and new standard could emerge in the future. Hence, I suggest to call this emoji with the general term "2D barcode".

Design considerations for images.

The proposed emoji is based on the ISO/IEC 18004, which is by far the most used type of 2D Barcode. However, different algorithms could be used to generate a 2D Barcode, such as Aztec Code or a Micro QR code. If the committee consider on of these systems a better choice, it could be used in place of the proposed image without losing generality.

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