

50 Things That Made the Modern Economy



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Last on

QR InChI Code Project

Leah McEwen, Jeremy Frey, Richard Hartshorn
InChI Trust & IUPAC



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Barcode

How vast mega-stores emerged with the help of a design originally drawn in the sand in 1948 by Joseph Woodland as he sat on a Florida beach, observing the furrows left behind, an idea came to him which

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🕒 9 minutes

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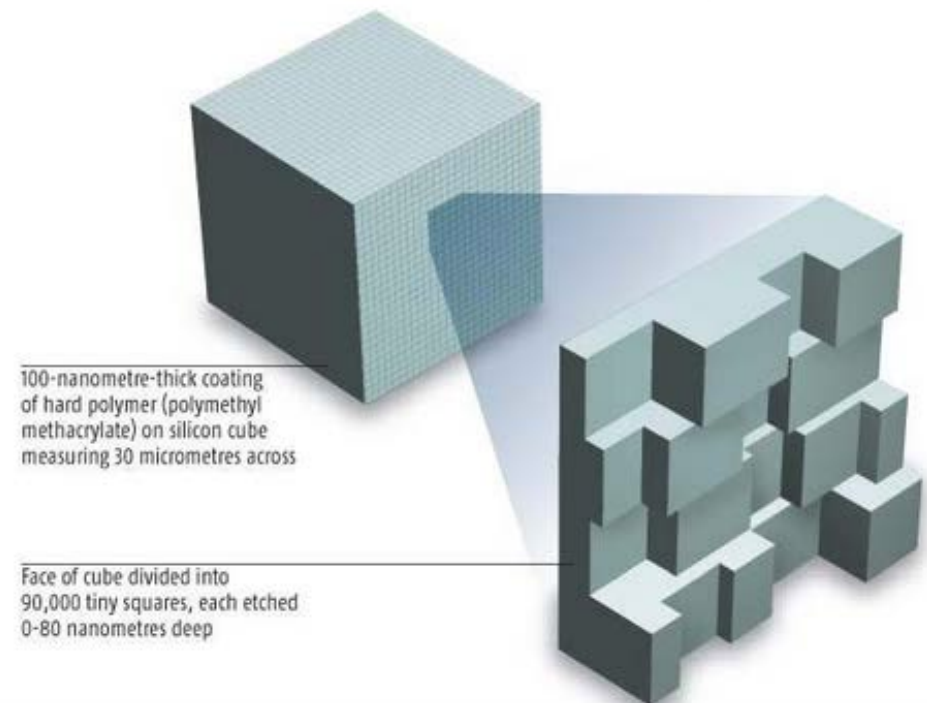
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Bar Codes

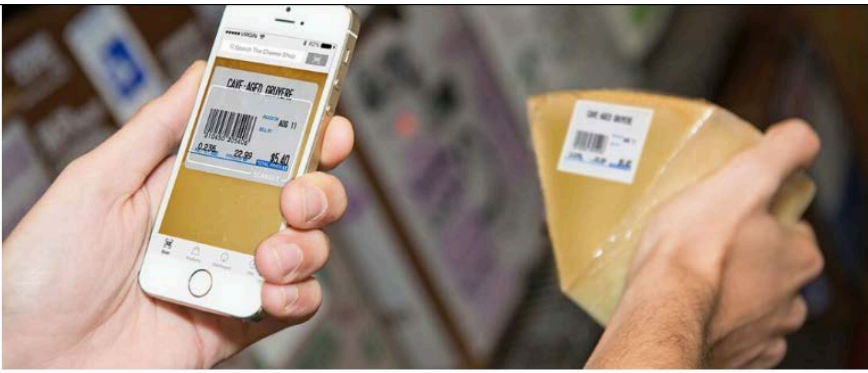
- One dimensional – limited information
- Two dimensional – QR – more information
- Three dimensional
- Alternatives
 - *Image Recognition*
 - RFID
 - Bluetooth style tags
 - NFC



QR codes



- A two-dimensional barcode
- The maximum capacity of a QR code is ~23500 bits
 - Around 3000 8-bit characters
- Contains multiple levels of error correction
 - The size of a QR code increases when more error correction is used
 - Up to 30% of a QR code can be destroyed and still remain readable



Types of Barcodes: Choosing the Right Barcode

Posted 27 Jan 15 at 20:36h in Barcode Scanning on Android, Barcode Scanning on iOS, Blog Series by Devon Tackels • 0 Comments

When choosing the right types of barcodes for your products, inventory or assets, you face many options. Today, we'll help you choose the right types of barcodes by walking through all the major 1D and 2D barcode types. We'll highlight the common uses for each one, as well as constraints that help you narrow down your options: perhaps your products have less than a square inch of printing space, or you might need to print on corrugated cardboard, or you need to print on a surface that is not flat.

Let's begin with an overview of 13 major barcode types: Code 39, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128, Code 128.

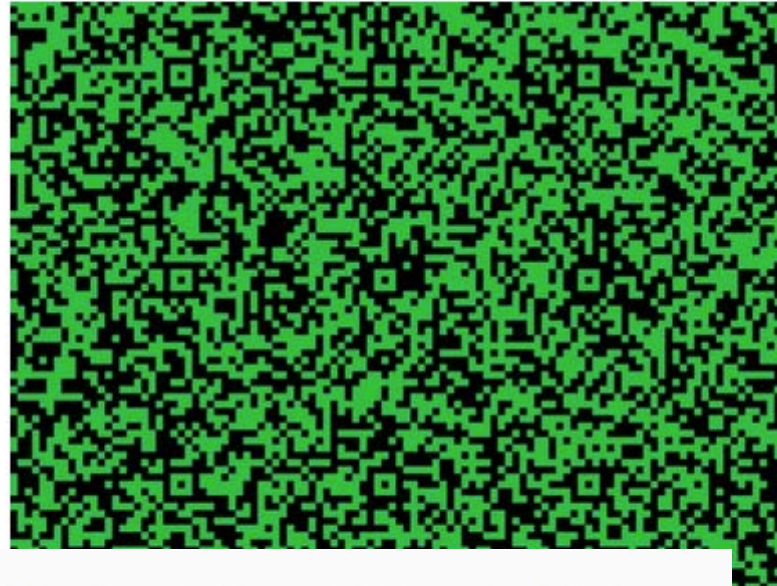
IMAGE RECOGNITION	VS	QR CODE
USABILITY You can scan the entire image or object from difficult angles and low light conditions, even if it's only partly visible.		You must capture the specific section where the QR code is. Different codes have different distance specifications.
PLACEMENT The entire image can be recognizable . No extra graphic marker must be added for its implementation.		The specific graphic marker must be visibly placed , which can be obtrusive to the end piece.
FLEXIBILITY The content is completely flexible . It can be updated anytime, on an existent product item or adding new SKUs to the database.		You must decide which items to include in your mobile experience prior to adding the codes. You cannot easily add or remove SKUs.
FEATURES You can have multiple features at the same time: a video playing, an interactive Augmented Reality and link to a website, for example.		You are restricted to one feature per scan , which is usually an URL.

Sources: Catchoom, Printing Images, Target Marketing Map, Uni Tag.

catchoom Image Recognition & Augmented Reality Solutions
Learn more at catchoom.com
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Code 128, ITF (2 of 5)

THE CURIOUS COMEBACK OF THE DREADED QR CODE



Finally, an Alternative to the Much-Hated QR Code

By Todd Wasserman, mashable.com
January 9th, 2014

[View Original](#)



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tion by Aleksandar Savic

CONNECTED LOGISTICS

Messaging Apps Are Making QR Codes a Thing Again

Erin Griffith
May 19, 2016



They're ugly to look at and unpleasant to use. QR codes (short for "quick response"), the square, scannable, black and white barcodes, proliferated with

QR Codes vs zapcodes

10 reasons why zapcodes beat QR codes

Existing QR code culture

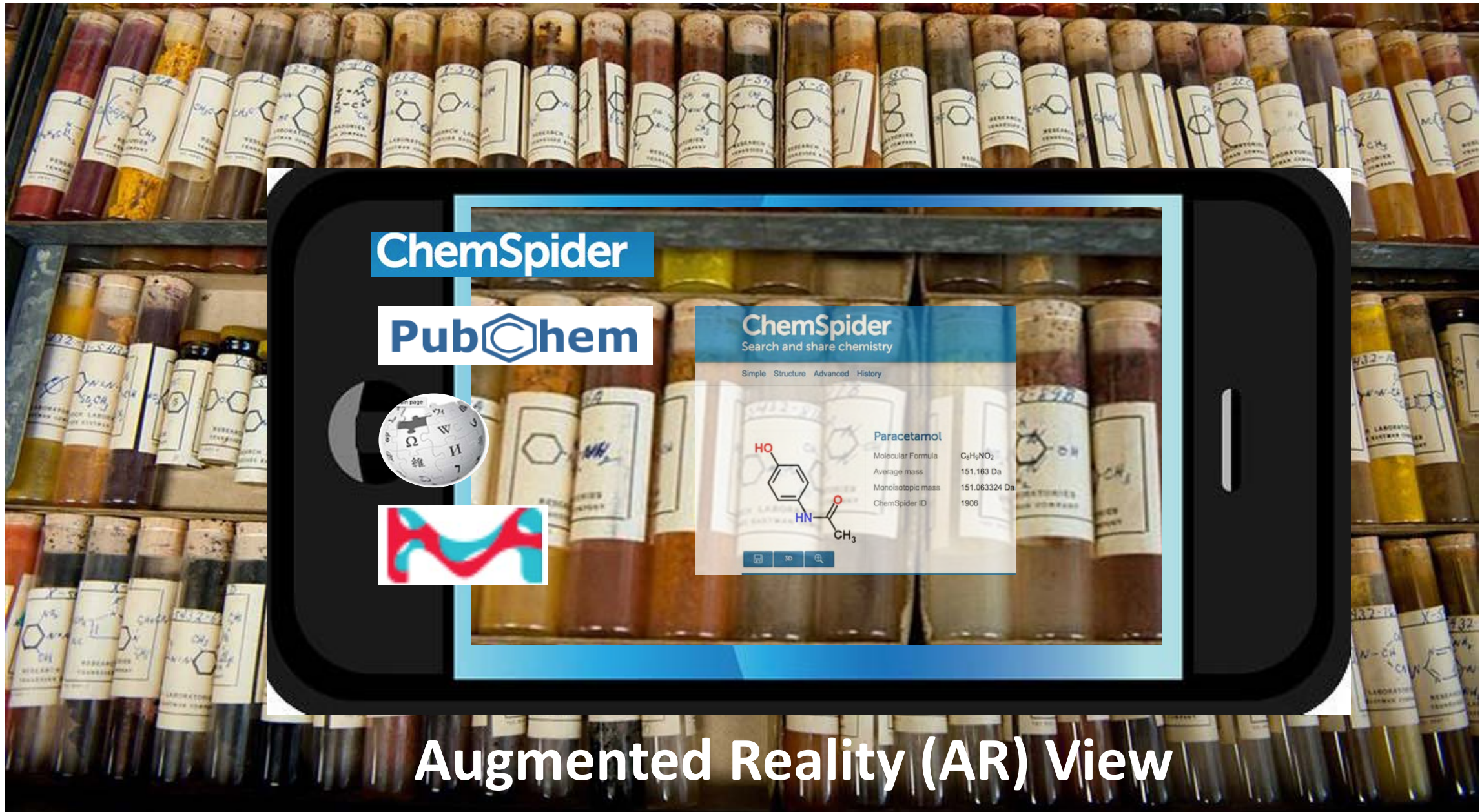
QR code apps have two modes of operation

(1) Message is in the form of a URL

- The URL is opened in a web browser
- Some apps will preview the URL so that the user can judge the quality of the URL

(2) Message is *not* in the form of a URL

- The message is shown as-is
- Could be offered the ability to do a general search

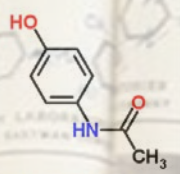


ChemSpider

PubChem

ChemSpider
Search and share chemistry

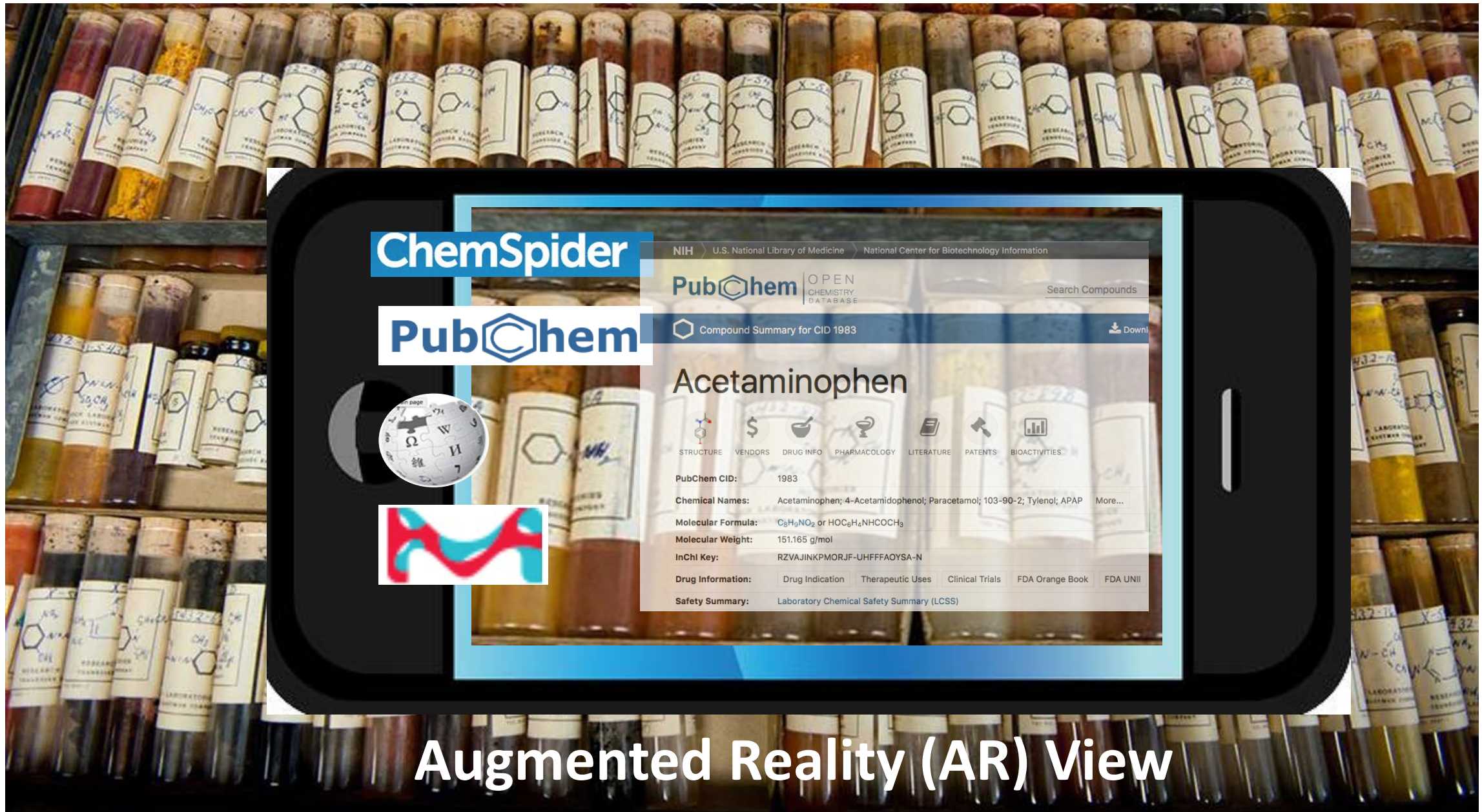
Simple Structure Advanced History



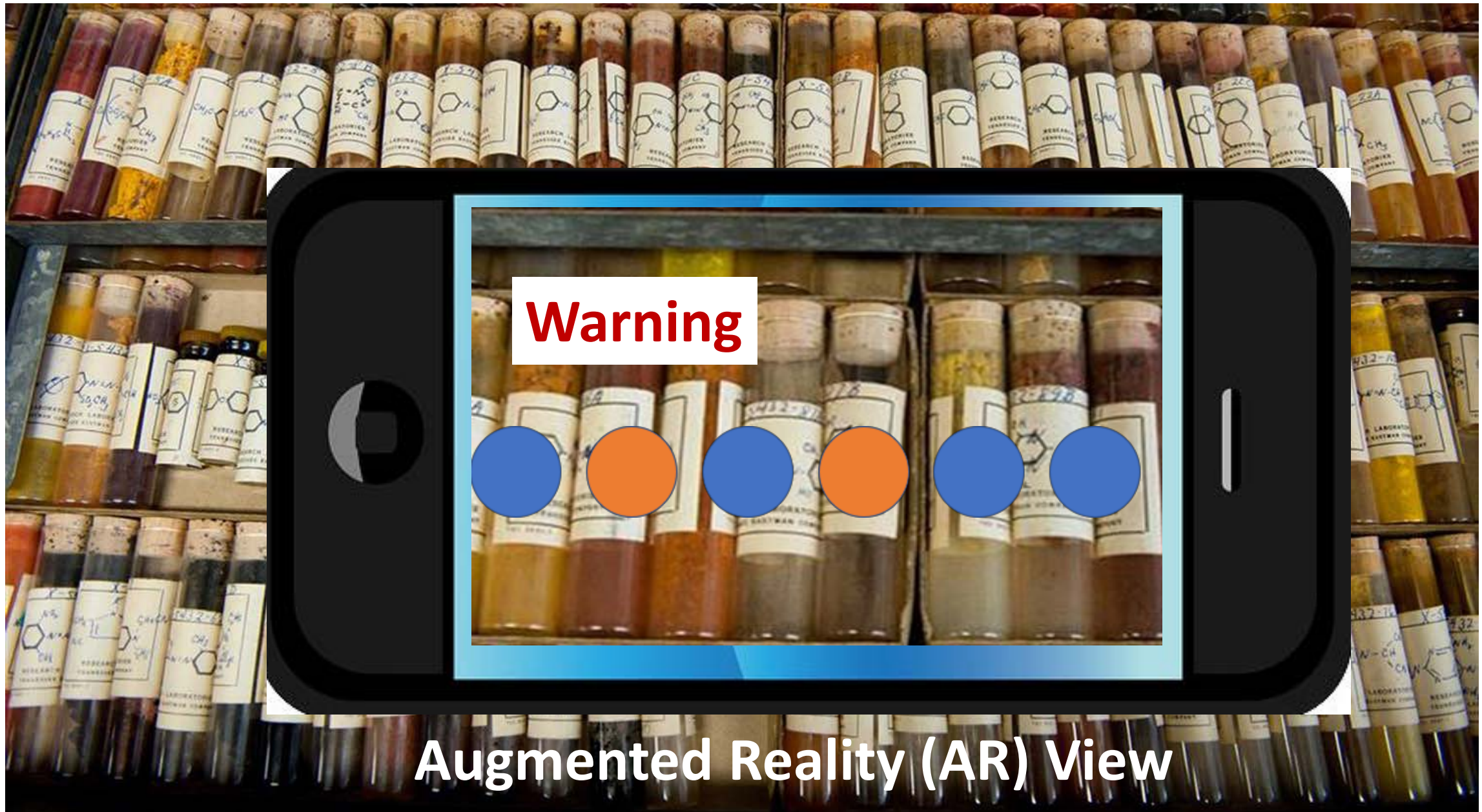
Paracetamol

Molecular Formula C₈H₉NO₂
Average mass 151.163 Da
Monoisotopic mass 151.063324 Da
ChemSpider ID 1906

Augmented Reality (AR) View



Augmented Reality (AR) View



Augmented Reality (AR) View

InChI QR code payload format

http://resolver.example.com/InChIKey/CIDRCQIUUYZBSG-UHFFFAOYSA-N?sid=abc_chemical&...

sid	Supplier ID
pid	Product (Chemical Entity) ID
bid	Batch ID
am	Amount as number with unit
pure	Purity (default to express as percentage)
ver	Exact version number of the InChI software used

Existing supplier databases

- If the supplier has an existing InChIKey resolver then no further work is required from the supplier

[http://resolver.example.com/InChIKey/\[InChIKey\]](http://resolver.example.com/InChIKey/[InChIKey])

is simply rewritten to

[http://www.abc-chemical.com/inchikey_search?q=\[InChIKey\]](http://www.abc-chemical.com/inchikey_search?q=[InChIKey])

- Required for full functionality
- The custom InChI QR code app recognizes the custom URI structure
 - It is able to pick the URI apart with needing to resolve the URI
- Safety information about compounds could be preloaded onto the device to remove reliance on infrastructure
- Could/Should be included in other frequently used apps
 - Social media apps



Custom QR code app



Inventory & Safety management

- The InChI QR code system will make it easier to perform inventory management
- We should be able to determine the contents of a shelf or cupboard by sweeping the camera of a mobile device across the containers to capture the QR codes
- Easier to answer questions like what is in this locked cupboard, if the cupboard
- If there's a question of contamination of an experiment with a specific compound, where are the closest possible sources?
- Where is all of element X in the department?



QR codes do not
always enhance
safety

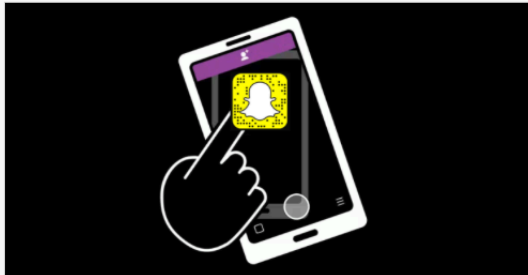
qr codes
Snapchat
Social

Snapchat now lets you make QR Snapcodes that open websites

Posted Jan 31, 2017 by [Josh Constine \(@joshconstine\)](#)

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Facebook gave businesses the Like button connected to their Page, and now Snapchat is giving websites their own QR Snapcodes. With today's iOS update and Android beta, users can create a unique Snapcode for a website, which will open inside Snapchat when they scan it with the app's

Ohio has one of the most stable environments for data centers.

Welcome to Ohio. It's on.

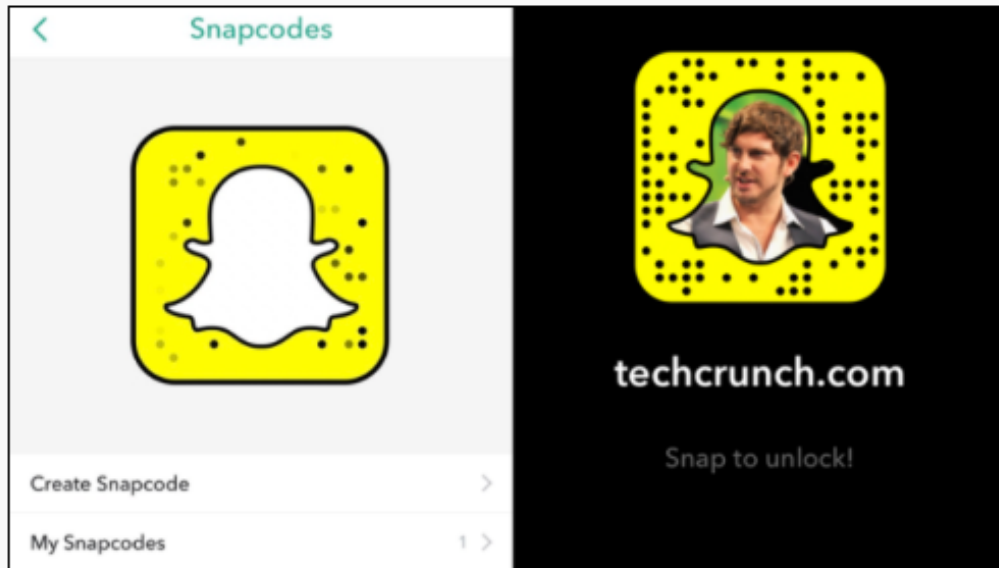
Ohio

jobs-ohio.com

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Snap Inc.


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22/11/2017

Social Media Tools

QR InChI



WHAT'S NEW

Facebook for Android

Keeping up with friends is faster than ever.

GET IT ON Google play

- Use icons to express feelings and activities
- Edit your posts and comments
- Create and share new photo albums

Snapchat totally ruined its Marie Curie filter for International Women's Day, this is not good

1.3k SHARES

Share on Facebook Share on Twitter



Did Marie Curie really wear fake eyelashes?

IMAGE: KERRY FLYNN/MASHABLE

Actions... Discussions...

- Software to generate QR codes
- Vendors to add QR code to labels and provide resolver to their product
 - Pistoia as a possible forum?
- Public version using EBI identifiers.org + PubChem as resolver
- InChI AR App
 - Facebook, Snapchat chemistry aware?

EMBL-EBI Services Research Training About us EMBL-EBI Hinxton

Identifiers.org Search

Examples: [ontology](#), [enzyme](#), [EMBL](#), [Japan](#)

Home Documentation Services About Request Prefix Feedback

Identifiers.org is an established resolving system that enables the referencing of data for the scientific community, with a current focus on the Life Sciences domain. It handles persistent identifiers in the form of [URIs](#) and [CURIEs](#). This allows the referencing of data in both a location-independent and resource-dependent manner. The provision of resolvable identifiers ([URLs](#)) fits well with the [Semantic Web](#) vision, and the [Linked Data](#) initiative.

Key facts

- **resolvable identifiers:** the system provides resolvable identifiers in the form of URIs and CURIEs
- **location independent:** the system is able to decouple the identification of records from the physical locations on the web where they can be retrieved
- **free to use:** there is no cost involved to register or use the identifiers or this facility
- **granularity of identifiers:** identifiers available at multiple levels (data collections, resources and

[www.ebi.ac.uk/services](#)

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EMBL Job Opportunities



22/11/2017



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