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PRESENTATION
FROM THE

ICA JOINT WORKSHOP



Olomouc
Czech Republic
April 27–30, 2018

Atlases & Cognition & Usability



UNIVERSITY
OF WARSAW

DO ALL DIGITAL NATIVES FALL FOR INTERACTIVE MAPS?

Katarzyna Słomska, Izabela Gołębiowska

University of Warsaw, Faculty of Geography and Regional Studies

Department of Geoinformatics, Cartography and Remote Sensing

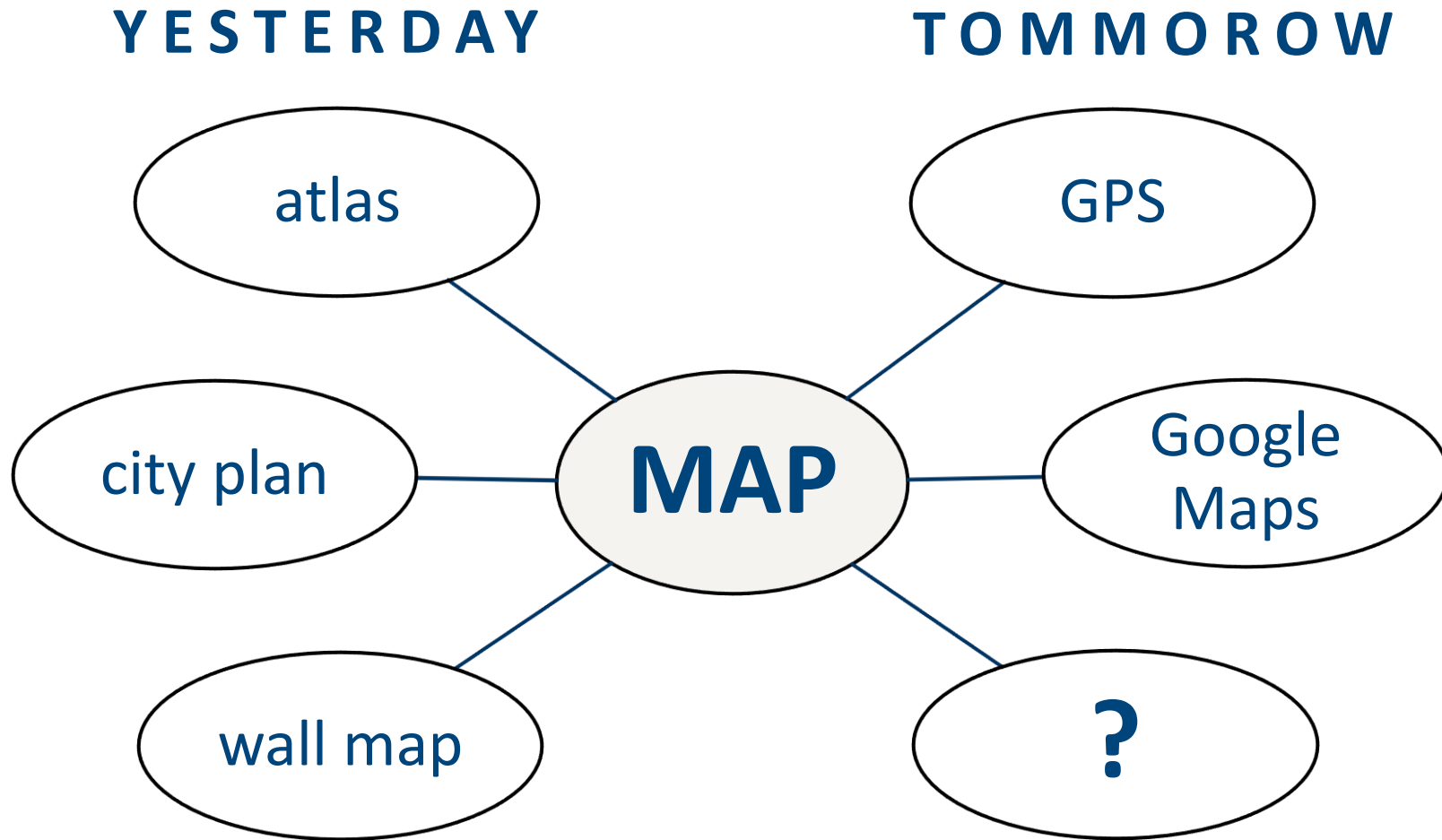
k.slomska@uw.edu.pl

April 27 – 30, 2018

ICA COMMISSIONS JOINT WORKSHOP

ATLASES, COGNITION, USABILITY

Tomorrow's maps?



Tomorrow's users?

Digital Natives

- “native speakers” of the digital language of computers, video games and the Internet



piktochart.com

Prensky, M 2001, 'Digital Natives, Digital Immigrants Part 1', *On the Horizon*, vol. 9, no. 5, pp. 1–6.

Kivunja, C 2013, 'Theoretical Perspectives of How Digital Natives Learn', *International Journal of Higher Education*, vol. 3, no. 1.

Tomorrow's users?

Digital Natives

- “native speakers” of the digital language of computers, video games and the Internet
- 1980 – the birth date



piktochart.com

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Users' preferences

YESTERDAY



TOMMOROW



Users' preferences

YESTERDAY

TOMMOROW



paper map

digital map
(interactive)

Pedersen P., Farrell P., McPhee E., 2005, "Paper versus Pixel: Effectiveness of Paper versus Electronic Maps To Teach Map Reading Skills in an Introductory Physical Geography Course." *Journal of Geography* Vol. 104 (5): 195–202.

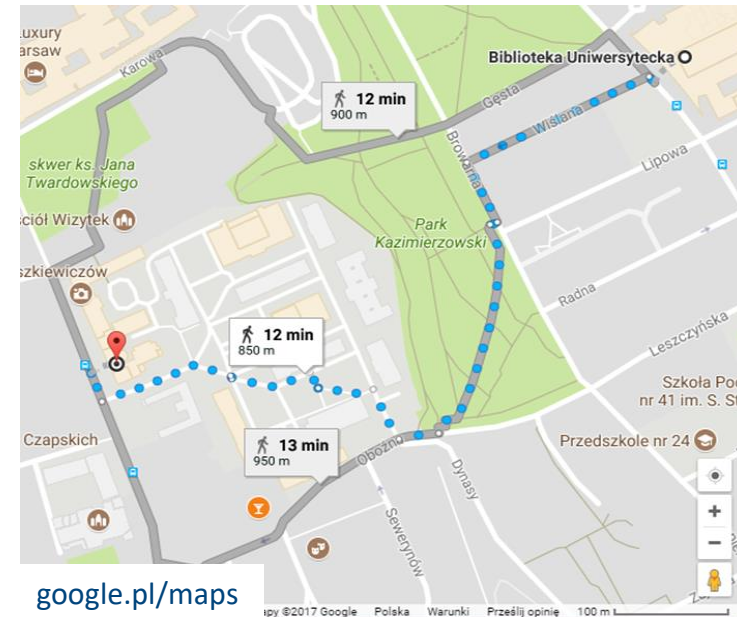
Axon S., Speake J., Crawford K., 2012, "At the next junction, turn left': Attitudes towards Sat Nav use." *Area* Vol. 44 (2): 170–77.

Speake J., 2016, "I've got my Sat Nav, it's alright": Users? Attitudes towards, and Engagements with, Technologies of Navigation." *The Cartographic Journal* Vol. 52 (4): 345–55.

Hurst, P & Clough, P 2013, 'Will we be lost without paper maps in the digital age?', *Journal of Information Science*, vol. 39, no. 1, pp. 48-60.

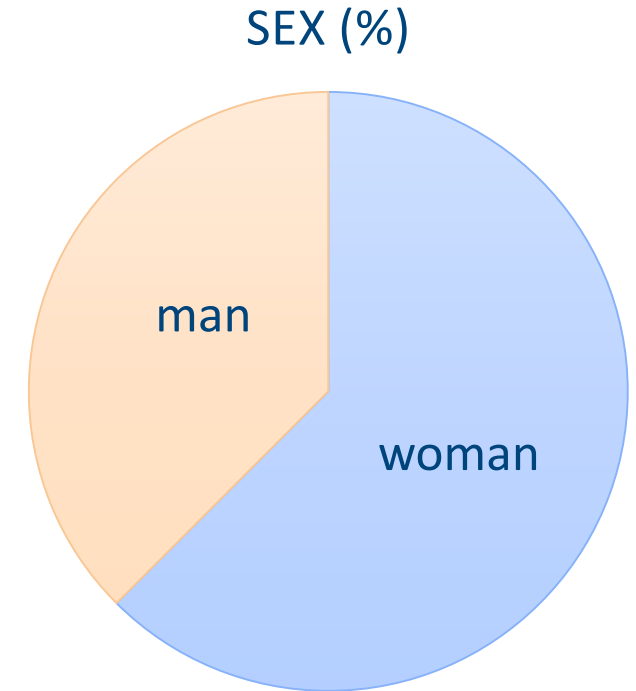
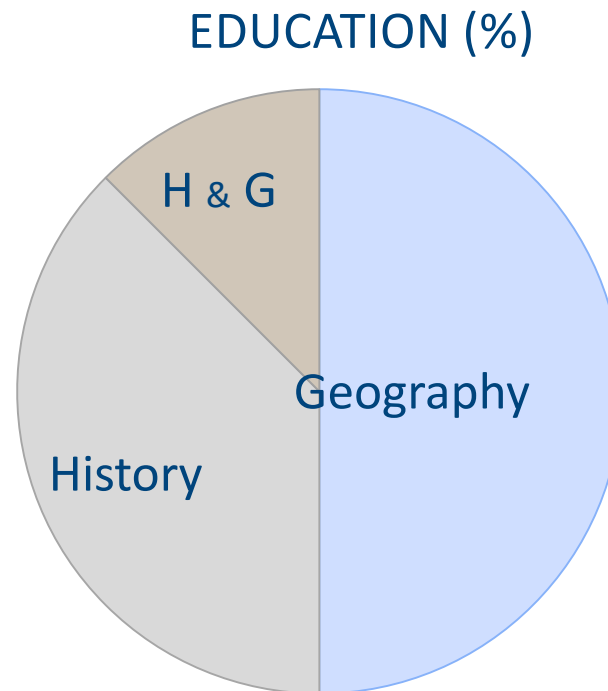
Looking for differences

Do all digital natives fall for interactive maps?



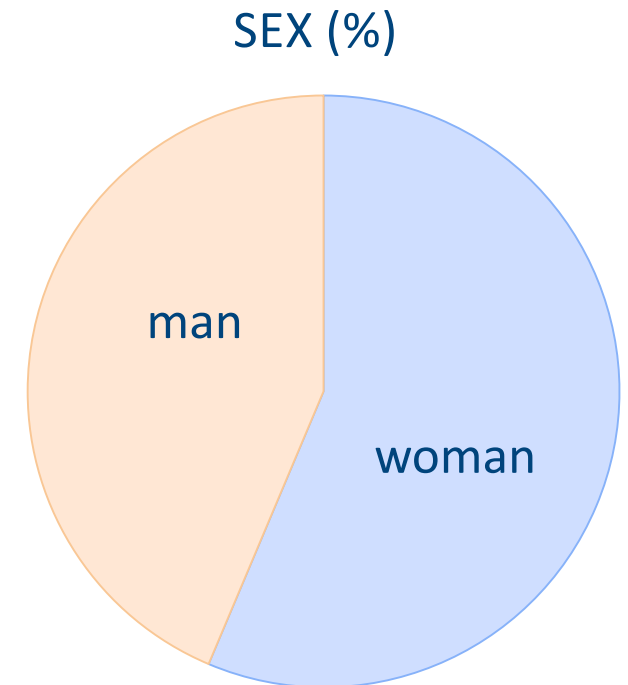
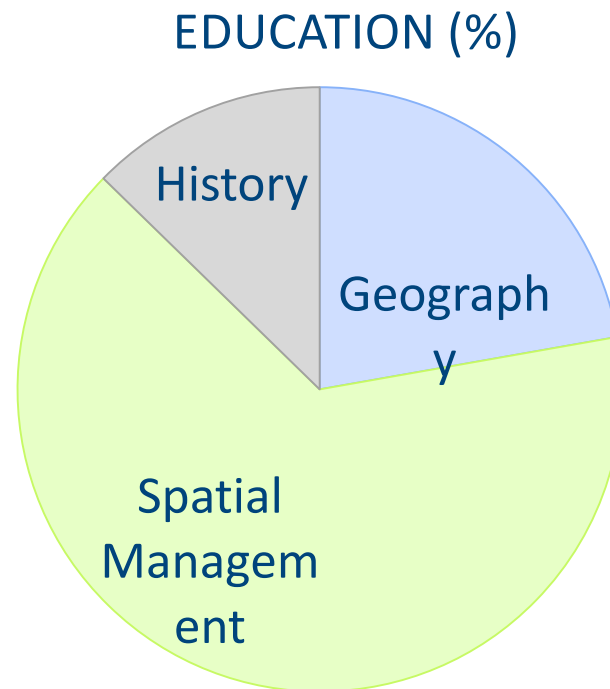
Pilot study

- 8 people
- 4 Novices & 4 Experts



Participants

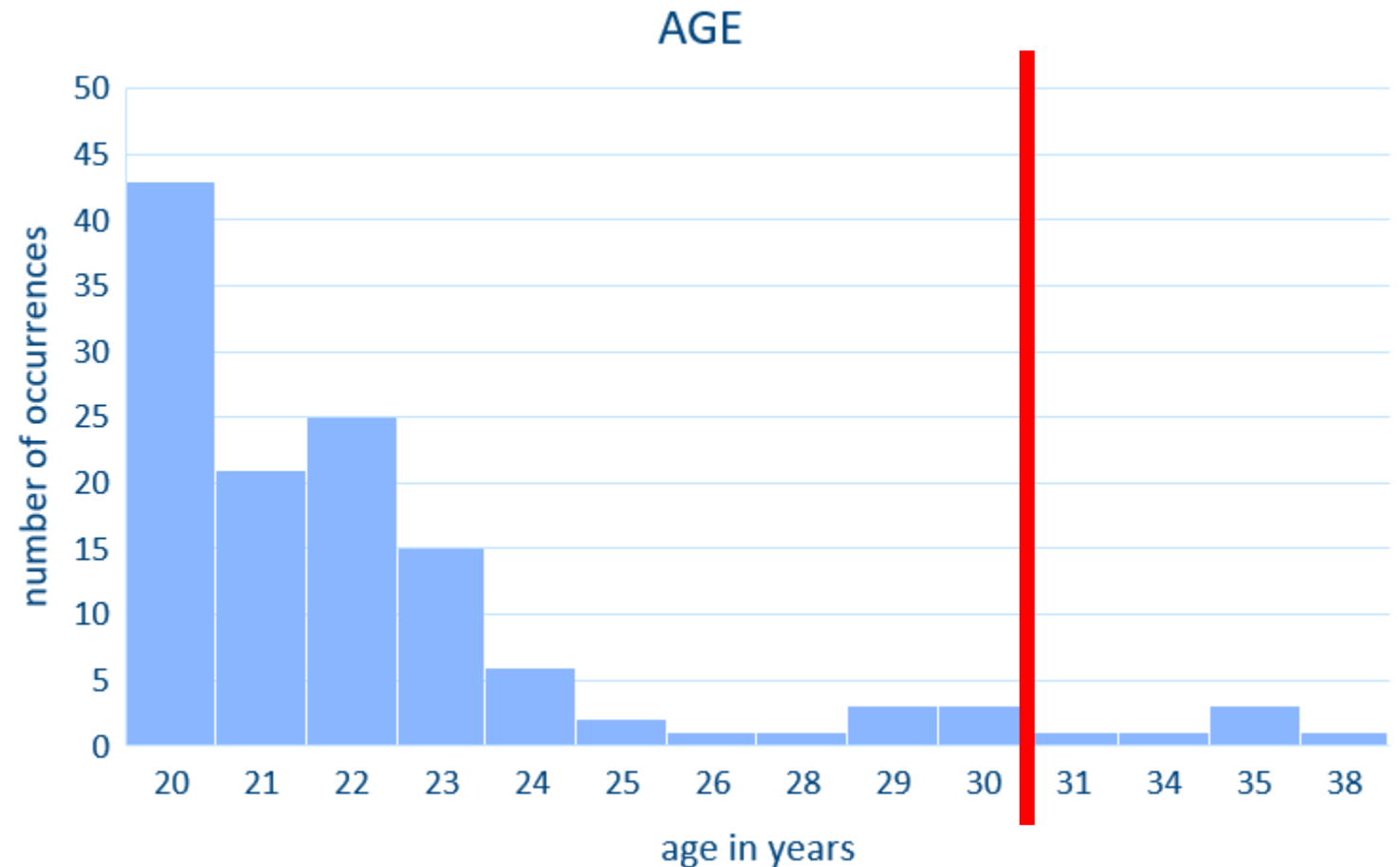
- 126 people



Participants

- 126 people

1980 – the birth date
of Digital Natives?

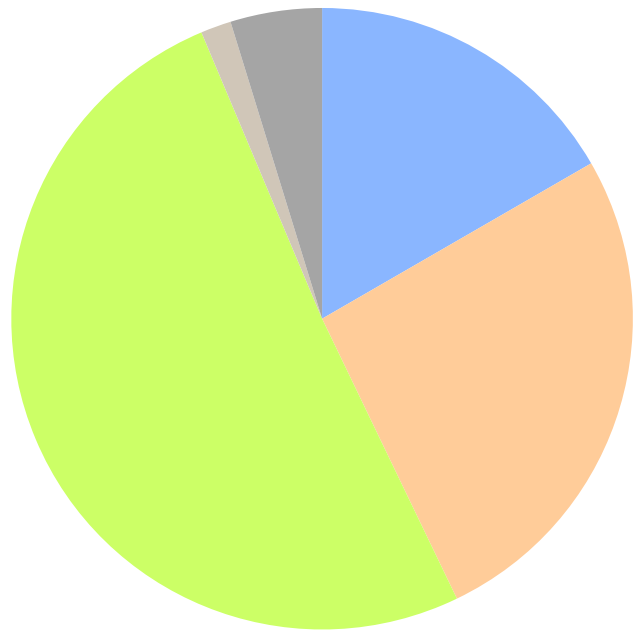


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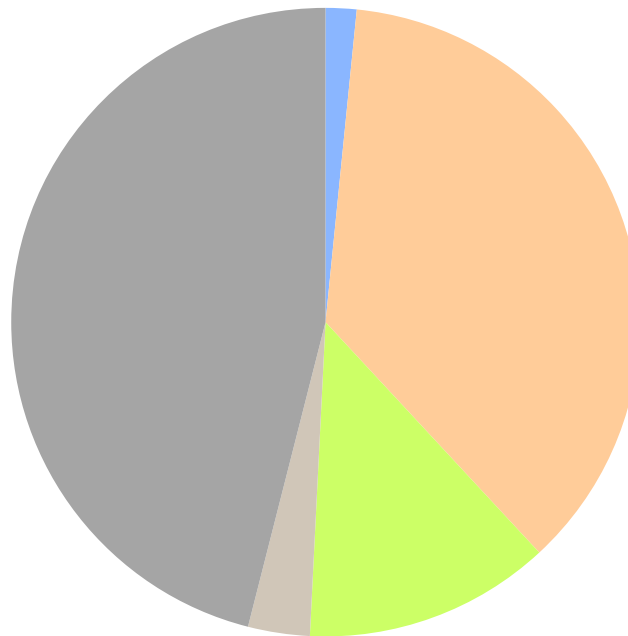
Kivunja, C 2013, 'Theoretical Perspectives of How Digital Natives Learn', *International Journal of Higher Education*, vol. 3, no. 1.

Usage of maps in different circumstances

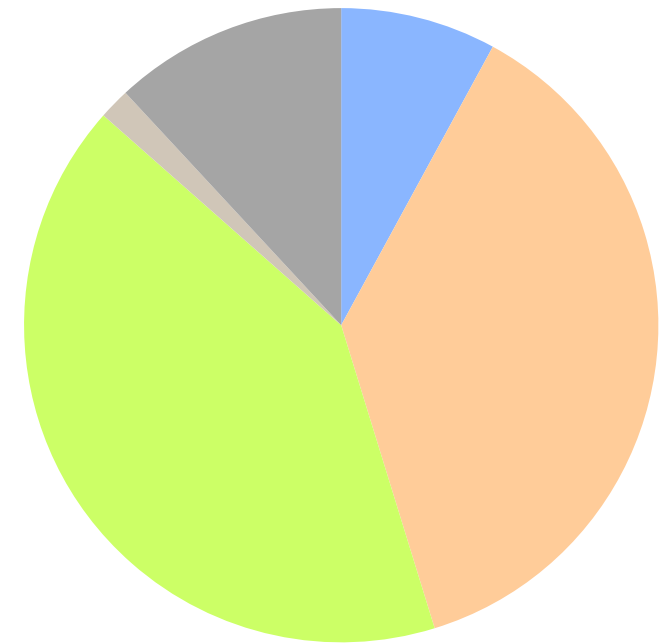
STUDYING (%)



WORK (%)



FREE TIME (%)



■ paper

■ interactive

■ paper & interactive

■ don't know

■ do not use

Usage of maps in different circumstances

	STUDYING	WORK	FREE TIME
GEOGRAPHY	Paper & Interactive	Interactive	Paper & Interactive
SPATIAL MANAGEMENT	Paper & Interactive	Don't use	Interactive
HISTORY	Paper & Interactive	Paper & Interactive	Paper & Interactive

■ paper

■ interactive

■ paper & interactive

■ don't know

■ do not use

Frequency: Paper or Interactive?

Paper

few times a month
or don't use

~~everyday~~

Interactive

few times a week or
month

EVERYDAY

Activities: Paper or Interactive?

Paper

P&I

Interactive

—

Planning a
road
- by bike

Planning a
road
- on foot
- by car

Navigation
- city & terrain
- known &
unknown

Measurements

Searching for
objects and
additional data

Preferences: Paper or Interactive?

	Planning a road			Navigation				Measurements	Search for an object	Additional data
	on foot	car	bike	cityK	cityU	terrainK	terrainU			
GEOGRAPHY	INT&PPR	INT&PPR	INT	INT	INT&PPR	INT&PPR	INT&PPR	INT	INT	INT
SPATIAL MANAGEMENT	INT	INT	INT	INT	INT	INT	INT	INT	INT	INT
HISTORY	INT&PPR	INT&PPR	INT	INT	INT	INT&PPR	INT&PPR	INT	INT	INT





PAPER map?.. 😊

- forced thinking
- no news
- cumbersome
- drenched
- creased



Still, paper map is better for me

Patrick Ng, <https://www.flickr.com/photos/moleskineart/>

FURTHER RESEARCH



- diversification of participants by background/experience
- longer age span (Digital Immigrants)
- empirical study with eye-tracking

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k.slomska@uw.edu.pl

Izabela Gołębiowska

i.golebiowska@uw.edu.pl

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