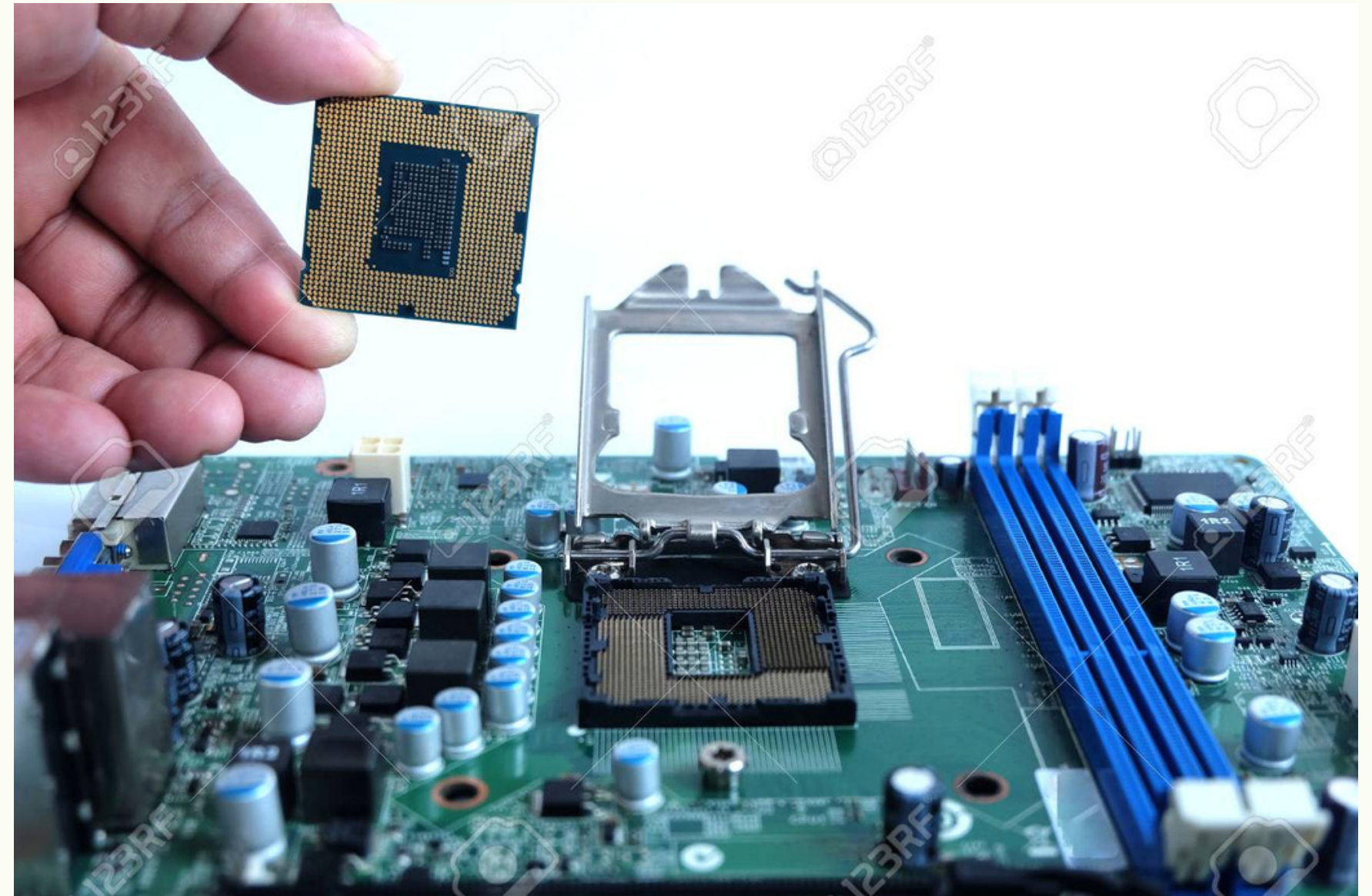




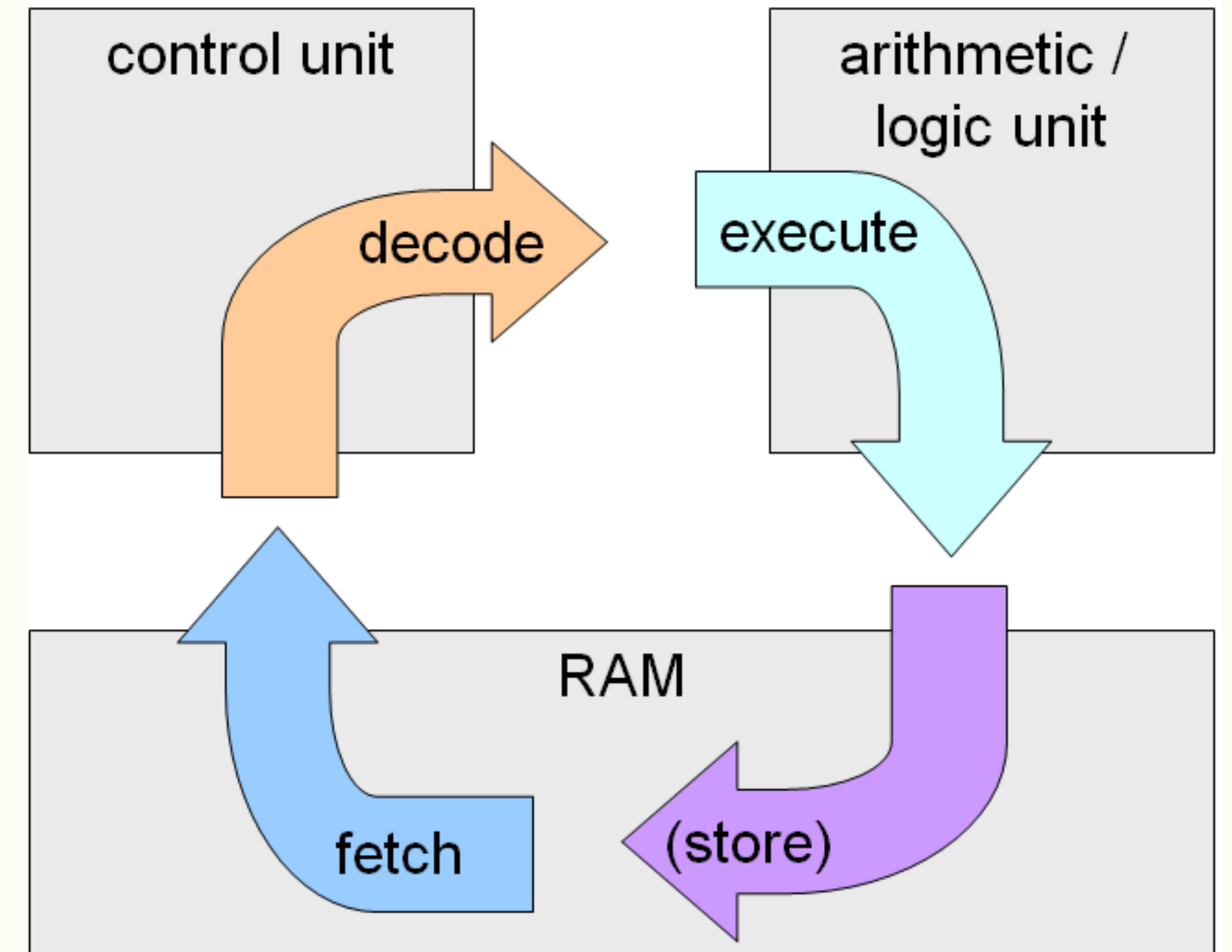
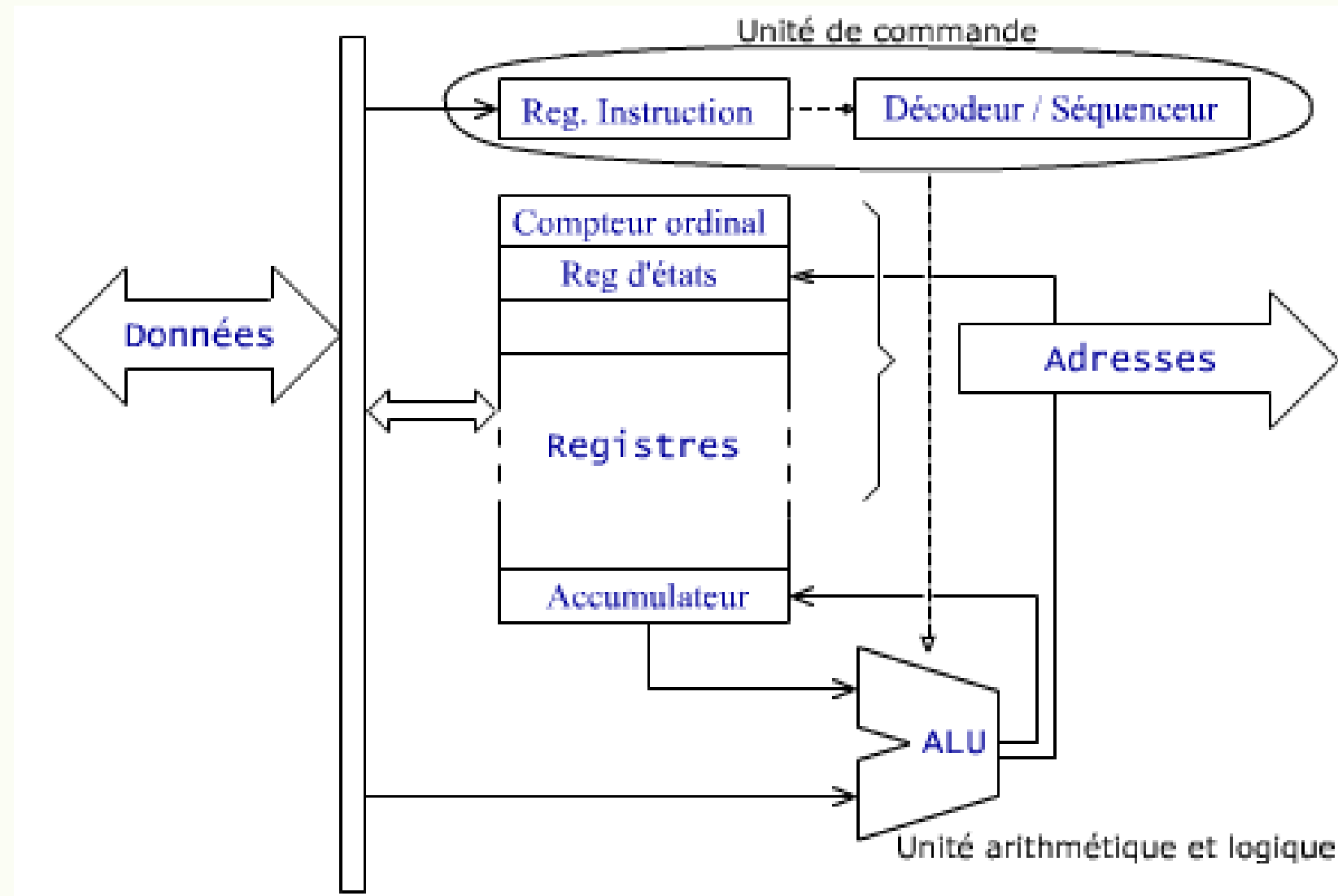
LE PROCESSEUR

Emma Le Roch, Anaëlle Derrien

QU'EST-CE QUE C'EST ?

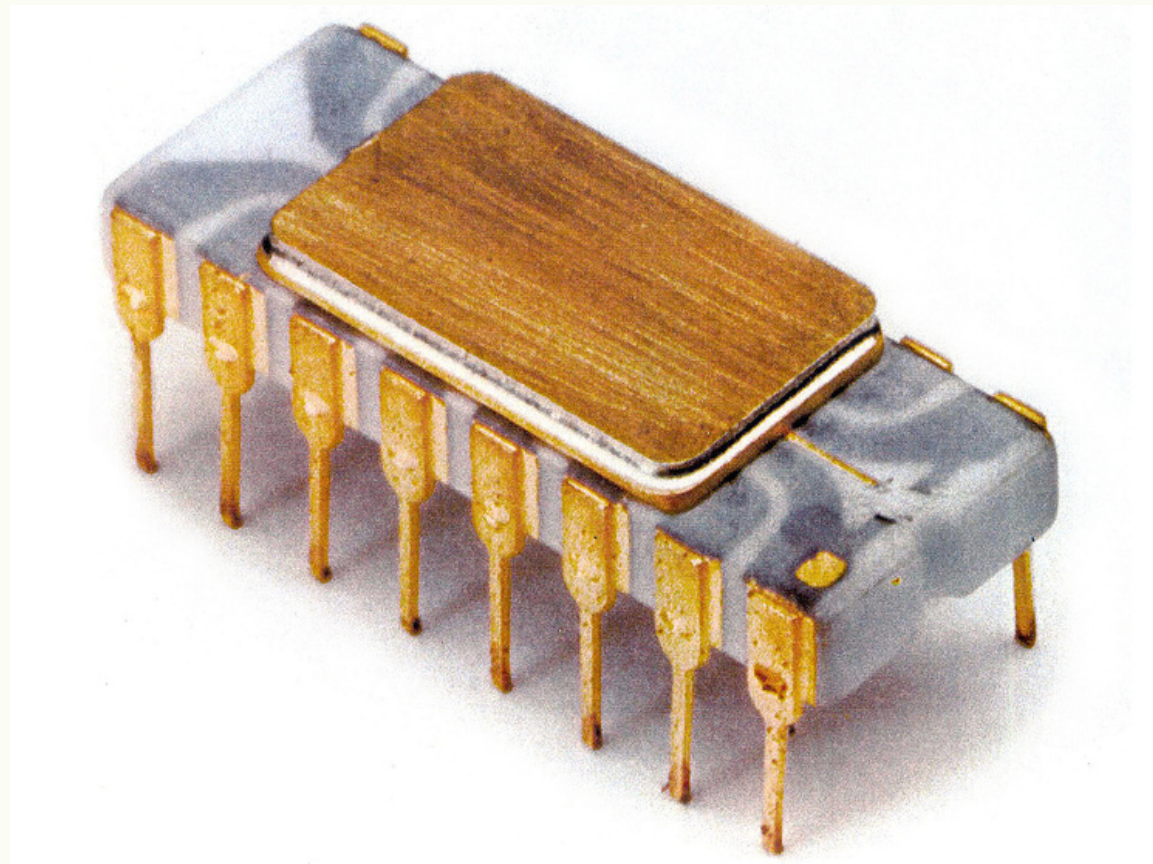


FONCTIONNEMENT



HISTOIRE

LE PREMIER MICROPROCESSEUR : L'INTEL 4004



TEXTE

THE EVOLUTION OF CPU: THE FUTURE OF PROCESSORS IN THE NEXT 10 YEARS

One thing is clear – the CPU won't be the way it used to be. It isn't going to be just better, it's going to be different. When it comes to modern technology, time flies really fast. If you think about the central processing unit, you'll probably imagine one of AMD or Intel's creations.

The CPU has undergone many transformations to become what it looks like today. The first major challenge it faced dates back to the early 2000s when the battle for performance was in full swing.

Back then, the main rivals were AMD and Intel. At first, the two struggled to increase clock speed. This lasted for quite a while and didn't require much effort. However, due to the laws of physics, this rapid growth was doomed to come to an end.

According to Moore's Law, the number of transistors on a chip was to double every 24 months. Processors had to become smaller to accommodate more transistors. It would definitely mean better performance. However, the resultant increase in temperature would require massive cooling.

Therefore, the race for speed ended up being the fight against the laws of physics.

It didn't take long for the solution to appear. Instead of increasing clock speeds, producers introduced multiple-core chips in which each core had the same clock speed. Thanks to that, computers could be more effective in performing multiple tasks at the same time.

The strategy ultimately prevailed but it had its drawbacks, too. Introduction of multiple cores required developers to come up with different algorithms so the improvements could be noticeable. This wasn't always easy in the gaming industry where the CPU's performance had always been one of the most important characteristics.

Another problem is that the more cores you have, the harder it is to operate them. It is also difficult to come up with a proper code that would work well with all the cores. In fact, if it was possible to develop a 150 GHz single-core unit, it would be a perfect machine. However, silicon chips can't be clocked up that fast due to the laws of physics.

The problem became so widely discussed that even the education sector joined in. If you have to come up with a paper related to this or a similar issue, you can turn to a custom essay service to ensure the best quality. Anyway, we will try to figure out the future of the chips ourselves.

<https://www.fluxmagazine.com/evolution-of-cpu-future-of-processors/>

GLOSSAIRE

EN

Processor

CPU (Central Processing Unit)

Core

Thread

Clock

Frequency

Transistor

Control unit

ALU (Arithmetic and Logical Unit)

Chip

I/O (Input/Output)

Register Unit

FR

Processeur

UCT (Unité Centrale de Traitement)

Cœur

Thread

Horloge

Fréquence

Transistor

Unité de contrôle (ou de commande)

UAL (Unité Arithmétique et Logique)

Puce

Entrées/Sorties

Registre
