MASSIMINO Pascal, PhD

Compression - Image & Media processing - Hardware interaction - Large-Scale Engineering $_{\rm v6}$



C++, assembly (NEON, x86), GLSL, and anything around to make these work and shipped at scale.

Deep hands-on 'get things done' engineering, along with a researcher mindset. Hardware and software.

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EXPERIENCE

Helsing — *Software Engineer*

2025 - present: Working at low-level (mostly software / hardware) on:

- <u>Centaur</u>: Fighter aircraft simulator (for RL)
- HX-2 strike drone
- Other UAV and special sensor projects...

Google — Principal Engineer

2006 - 2025:

- <u>Streetview</u>: imagery, backend, serving, <u>ipeg compression</u> (used everywhere at Google)
- YouTube: back-end, video compression, thumbnails, processing pipeline, Video for VR
- WebP: initiator of the format, wrote most of the initial code, worked with the ecosystem on adoption and user support.
 - Public talks to influencers: 2020 WebP Rewind, 2021 WebP Recap, how compression works...
 - WebP2: Next-gen format my team and I experimented with.
 - Researched compressing images in ~200 bytes
- AOMedia: developing AV1/AVIF video codec with industry partners.
 - Public advocate and speakers: <u>#1</u> in french, <u>#2</u>, <u>#3</u>, <u>slides</u>, ...
- Manager of small dedicated team
- 21 US patents

XviD Solutions GmbH — Co-Founder

2000-2007, Video Codec Consulting & Development

Co-Founded <u>Xvid Solutions</u> to leverage the open-source development of the <u>XviD</u> code (in <u>Ffmpeg</u> notably). Wrote MPEG2, H263, H264 codecs for various DSP platforms in all sorts of low-level languages. Shipped in volume to numerous set-top boxes and home devices.

Ilog, Paris — Senior Engineer

 $2000-2005, Operation \ Research \ and \ Constraint \ Propagation \ technology. \ Worked \ on \ the \ flagship \ \underline{Scheduler} \ product \ until \ the \ acquisition \ by \ IBM.$

EDUCATION and RESEARCH

PhD, 1999 — Theoretical Physics

- Elastic Ising Models : Modèle d'Ising compressible (in french)
- Effect of magnetoelastic interactions on the phase transition of two-dimensional Ising spin system

Alma mater: Ecole Normale Superieure de Paris (1991)

SIDE INTERESTS

- · FinTech: business angel and investor
- Entrepreneur / consulting: metaskal.com
- Marathon & Trail runner Rock Climbing Muay Thai Music & Rock band