We had 64-bit, yes. What about second 64-bit?
Mathieu Bacou†, Adam Chader†, Chandana Deshpande‡, Christian Fabre*, César Fuguet*, Pierre Michaud**, Arthur Perais†, Frédéric Pétrot†, Gaël Thomas†, Eduardo Tomasi‡*

† Télécom Sud Paris, IP Paris  ‡ Univ. Grenoble Alpes, CNRS, Grenoble INP‡, TIMA  * Univ. Grenoble Alpes, CEA, List  ** Inria, Univ. Rennes, CNRS, IRISA

128-bit Architecture
• RV128 extension as a common denominator: All agents (CPUs, GPUs, TPUs, FPGAs) are RV128-capable
  → Satellite kernels can run anywhere

128-bit General Purpose Microarchitecture
• Naively: Double datapath width (bypass, registers, functional units)
• Dennard scaling and Moore’s Law not there to absorb the change anymore: Need to limit hardware cost of RV128