IN5050: Programming heterogeneous multi-core processors

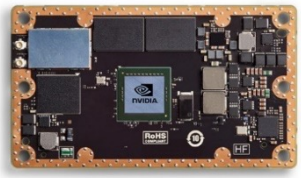
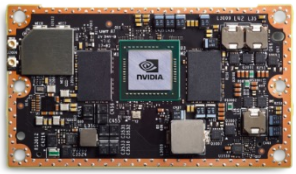
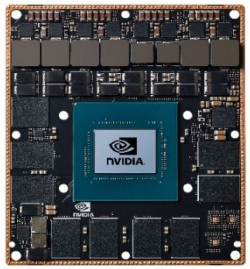
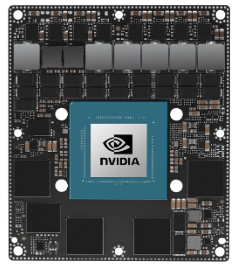
… because the OS-course is just too easy!

Home Exam 1: Preliminary Results

March 25th, 2022

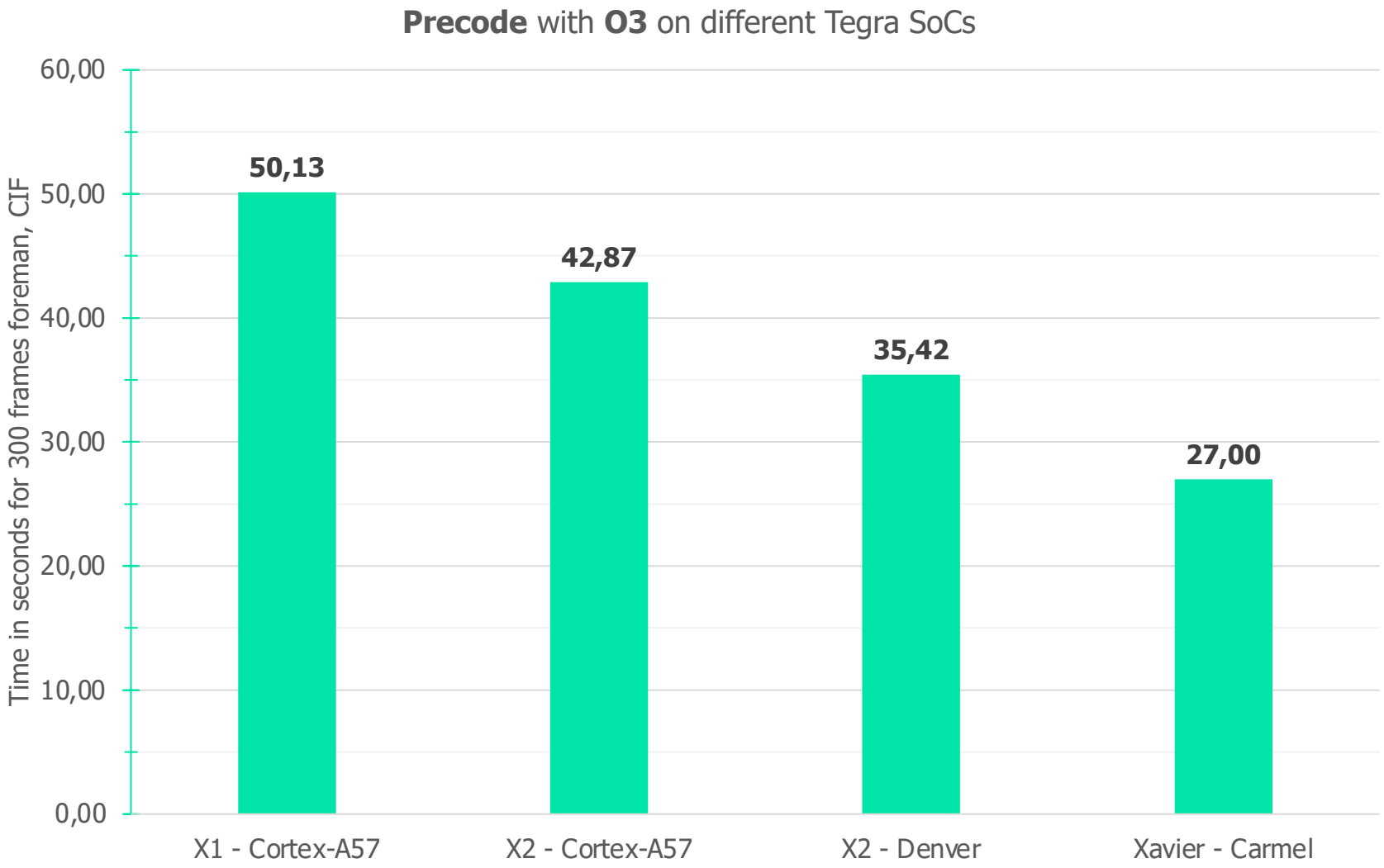
Håkon Kvale Stensland

Tegra – A family of Nvidia Tegra SoCs

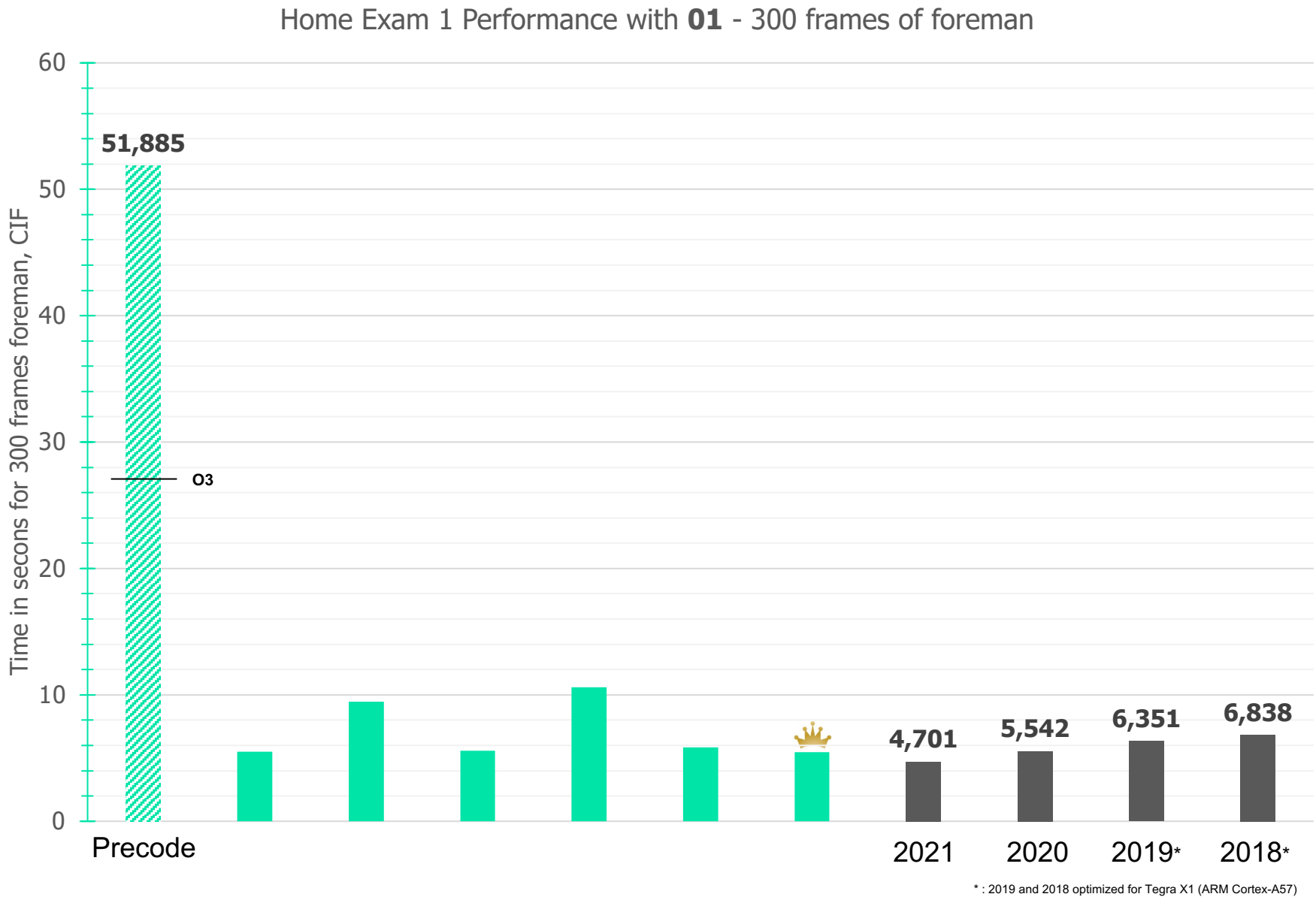
	Jetson TX1 *(Erista)*	Jetson TX2 *(Parker)*	Jetson AGX Xavier	Jetson AGX Orin
CPU	4 x ARM Cortex-A57	4 x ARM Cortex-A57	8 x Nvidia Carmel	12 x ARM Cortex-A78AE
	4 x ARM Cortex-A53	2 x Nvidia Denver 2		
Frequency	1,73 GHz	2,0 GHz	2,26 GHz	2,2 GHz
GPU	*256-core Maxwell*	*256-core Pascal*	512-core Volta	2048-core Ampere
Memory	4 x 16-bit LPDDR4	4 x 32-bit LPDDR4	8 x 32-bit LPDDR4	8 x 32-bit LPDDR5
Frequency	1600 MHz	1866 MHz	2133 MHz	3200 MHz
Memory Capacity	4 GB	8 GB	16 / 32 / 64 GB	32 / 64 GB
PCI Express	4-lane PCIe Gen 2	4-lane PCIe Gen 2	8-lane PCIe Gen 4	8-lane PCIe Gen 4
Process	TSMC 20nm	TSMC 16nm FinFET	TSMC 12nm FFN	Samsung 8nm (8N)
TPD	15 W	15 W	30 W	60 W

Performance on newer Tegra SoCs




H1 Performance

Performance Results from H1



Home Exam 1: Best Poster & Presentation Award

Group 4

Luk Burchard

&

Jonas Lunde