

ist sie längst selbst eines, was Fliegen lernen von Kim Koch, der erste Film, der sich exklusiv mit skatenden Mädchen in Deutschland beschäftigt, dokumentiert. Neben Rodi kommen auch noch Nina Braun, die mit "Sumo" das erste und bisher einzige Skate-Label für Frauen gründete, und Ester Vonplon, Fotografie-Studentin und Skaterin, darin zu Wort. Insgesamt ist die Thematik "Mädchen in Jugendkulturen" in Deutschland noch nicht so gut erforscht und dokumentiert wie in den anglo-amerikanischen Ländern. Soziologen und Jugendforscher konstatieren gerade eine Eroberung der gesamten Street Art-Szene durch Mädchen und bewerten dies als positiven Akt der Emanzipation. Dagegen ist im Falle von rechtsextremen, prügelnden Mädchen noch nicht klar, ob hier auch von Emanzipation geredet werden kann. 57 Prozent der Gymnasiasten, aber nur 38 Prozent der Hauptschüler blicken zuversichtlich in die Zukunft. Die Jugend 2006 blickt nicht mehr so optimistisch in die Zukunft wie die Jugend 2002: 69 Prozent haben Angst vor Arbeitslosigkeit, vier Jahre zuvor waren es nur 55 Prozent. In als unsicher empfundenen Zeiten gewinnt die Familie an Bedeutung.

Saizewa I.O., *Wissenschaftsleiterin*

INNOVATIONS IN THE NEW INTEL'S PROCESSORS

Popov A., *gr. IN-71*

Marking the next step in Intel's "tick-tock" product strategy and cadence to deliver a new process technology with an enhanced microarchitecture or entirely new microarchitecture every year, Intel Corporation will begin producing its next-generation Penryn family of processors. These new processors benefit from enhancements to the Intel® Core™ microarchitecture and also Intel's industry-leading 45nm Hi-k process technology with its hafnium-based high-K + metal gate transistor design, which results in higher performance and more energy-efficient processors.

PENRYN FAMILY MICROARCHITECTURE INNOVATIONS

Technical Marvel -- 45nm next-generation Intel® Core™2 quad-core processors will have 820 million transistors. Thanks to our high-k metal transistor invention, think of 820 million more power efficient light bulbs going on and off at light-speeds. The dual-core version has a die size of 107mm², which is 25 percent smaller than Intel's current 65nm products -- and quarter of the size of the average U.S. postage stamp -- and operate at the same or lower power than Intel's current dual core processors.

Deep Power Down for Energy Savings, Improved Battery Life -- The mobile Penryn processor has a new advanced power management state called

Deep Power Down Technology that significantly reduces the power of the processor during idle periods such that internal transistor power leakage is no longer a factor. This helps extend battery life in laptops. This is a major advancement over previous generation industry leading Intel mobile processors.

Intel Dynamic Acceleration Technology Enhanced Performance for Single Threaded Apps -For the mobile Penryn processor, Intel has enhanced the Intel® Dynamic Acceleration Technology available in current Intel Core 2 processors. This feature uses the power headroom freed up when a core is made inactive to boost the performance of another still active core.

Speeding Up Video, Photo Imaging, and High Performance Software -- Penryn includes Intel® Streaming SIMD Extensions 4 (SSE4) instructions, the largest unique instruction set addition since the original SSE Instruction Set Architecture (ISA). This extends the Intel® 64 instruction set architecture to expand the performance and capabilities of the Intel® Architecture.

Enhanced Intel® Virtualization Technology -- Penryn speeds up virtual machine transition (entry/exit) times by an average of 25 to 75 percent. This is all done through microarchitecture improvements and requires no virtual machine software changes. Virtualization partitions or compartmentalizes a single computer so that it can run separate operating systems and software, which can better leverage multicore processing power, increase efficiency and cut costs by letting a single machine act as many virtual "mini" computers.

Higher Frequencies -- Penryn family of products will deliver higher overall clock frequencies within existing power and thermal envelopes to further increase performance. Desktop and server products will introduce speeds at greater than 3GHz.

Fast Division of Numbers - Penryn-based processors provide fast divider performance, roughly doubling the divider speed over previous generations for computations used in nearly all applications through the inclusion of a new, faster divide technique called Radix 16. The ability to divide instructions and commands faster increases a computer's performance.

Larger Caches -- Penryn processors include up to a 50 percent larger L2 cache with a higher degree of associativity to further improve the hit rate and maximize its utilization. Dual-core Penryn processors will feature up to a 6MB L2 cache and quad-core processors up to a 12MB L2 cache. Cache is a memory reservoir where frequently accessed data can be stored for more rapid access. Larger and faster cache sizes speed a computer's performance and response time.

Alexahina T.O. *EL adviser*