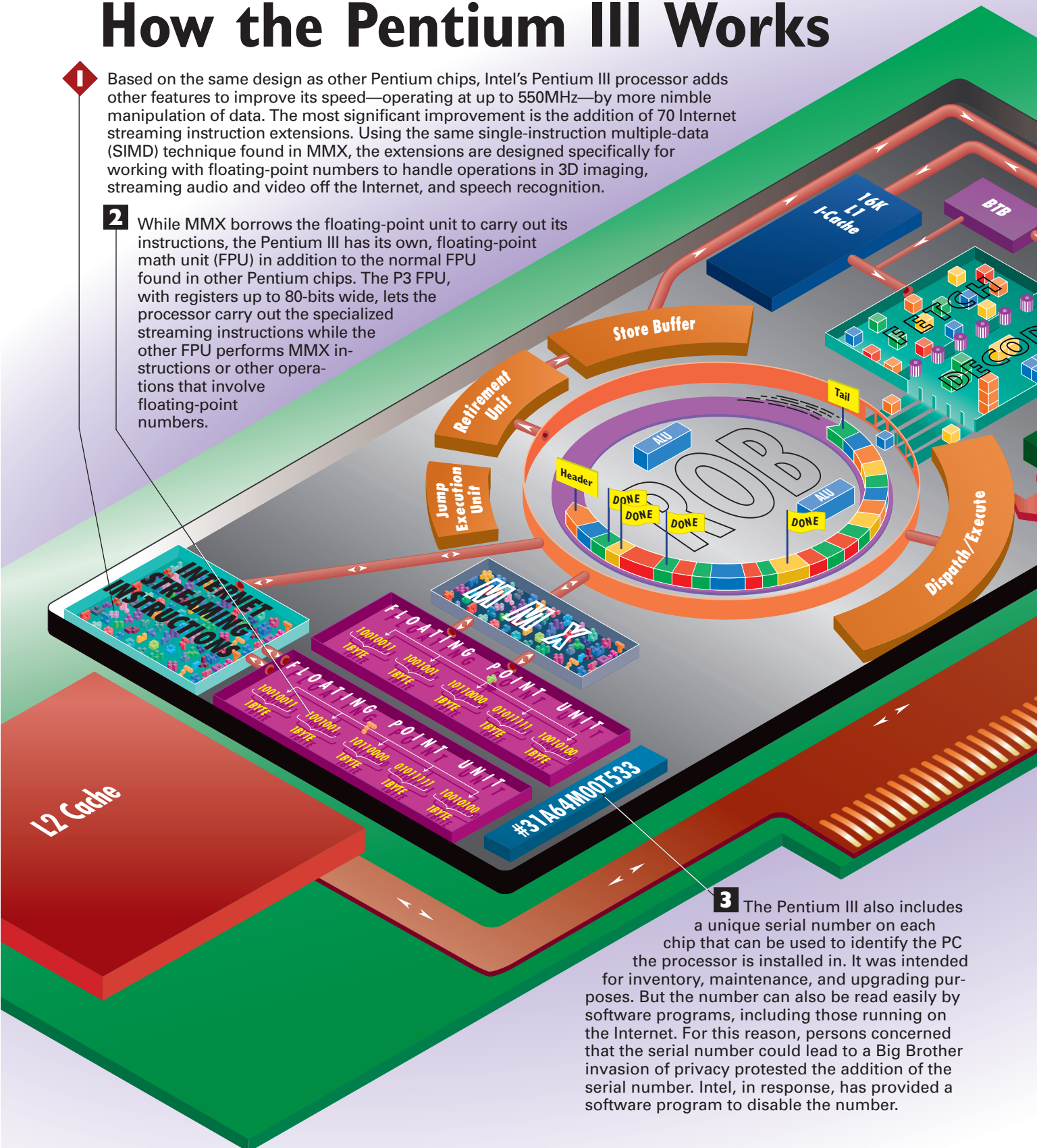


# How the Pentium III Works

**1** Based on the same design as other Pentium chips, Intel's Pentium III processor adds other features to improve its speed—operating at up to 550MHz—by more nimble manipulation of data. The most significant improvement is the addition of 70 Internet streaming instruction extensions. Using the same single-instruction multiple-data (SIMD) technique found in MMX, the extensions are designed specifically for working with floating-point numbers to handle operations in 3D imaging, streaming audio and video off the Internet, and speech recognition.

**2** While MMX borrows the floating-point unit to carry out its instructions, the Pentium III has its own, floating-point math unit (FPU) in addition to the normal FPU found in other Pentium chips. The P3 FPU, with registers up to 80-bits wide, lets the processor carry out the specialized streaming instructions while the other FPU performs MMX instructions or other operations that involve floating-point numbers.



**3** The Pentium III also includes a unique serial number on each chip that can be used to identify the PC the processor is installed in. It was intended for inventory, maintenance, and upgrading purposes. But the number can also be read easily by software programs, including those running on the Internet. For this reason, persons concerned that the serial number could lead to a Big Brother invasion of privacy protested the addition of the serial number. Intel, in response, has provided a software program to disable the number.