

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

PACT XPP SCHWEIZ AG

Plaintiff,

v.

INTEL CORPORATION

Defendant.

Case No. _____

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff PACT XPP Schweiz AG, for its Complaint against Intel Corporation (“Intel” or “Defendant”), hereby alleges as follows:

PARTIES

1. Plaintiff PACT XPP Schweiz AG is a Swiss corporation, with its principal place of business in Switzerland. PACT XPP Schweiz AG is the assignee of all patents identified in this Complaint including all rights to sue for past and future damages for infringement of said patents.

2. Upon information and belief, Intel is a Delaware corporation with its corporate headquarters in Santa Clara, California and manufacturing facilities in Oregon, Arizona, New Mexico, Massachusetts, and numerous other countries.

3. Intel, founded in 1968, has over an 80% market share in computer processor technology, and over \$70 Billion in revenues producing \$29.4 Billion of cash from operations and returned nearly \$16.3 Billion to shareholders in 2018 based on a gross profit margin of 61.7% of revenues. Intel’s two major operating segments are the PC Client Group, which produced over \$37 Billion in revenue for 2018 and focuses on the processors found in consumer-

COUNT VIII – INFRINGEMENT OF U.S. PATENT NO. 9,075,605

206. PACT incorporates each of the above paragraphs 1-35 as though fully set forth herein.

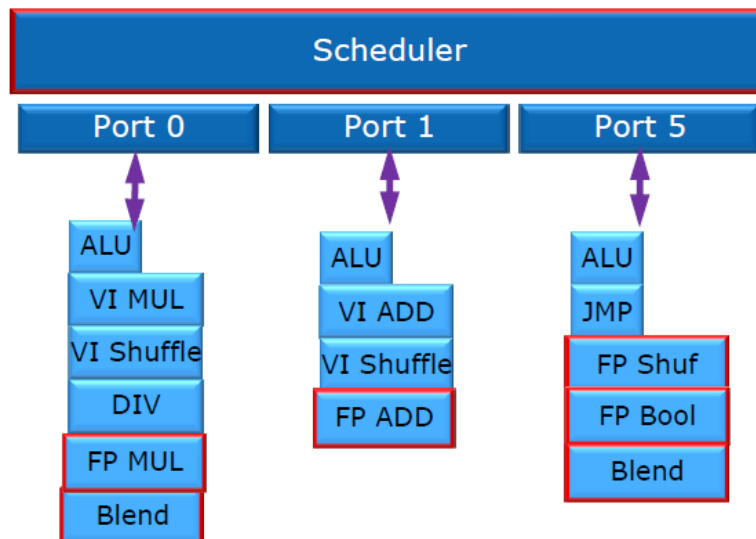
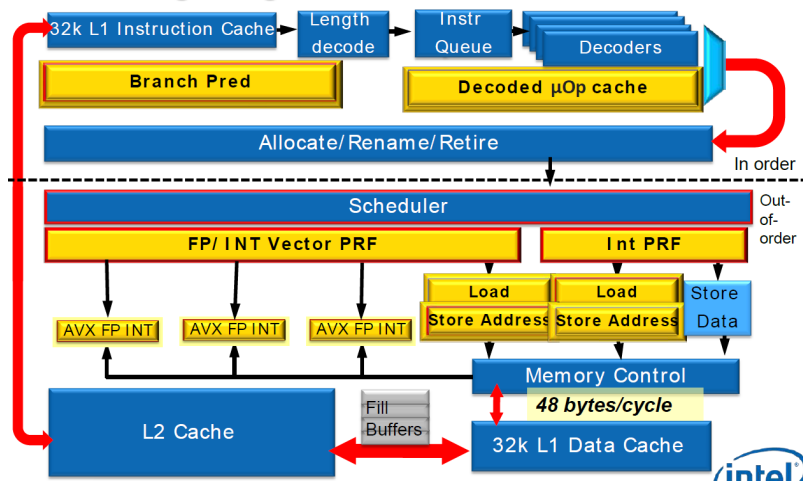
207. PACT is informed and believes, and thereon alleges, that Intel has infringed and unless enjoined will continue to infringe one or more claims of the '605 Patent, in violation of 35 U.S.C. § 271, by, among other things, making, using (including testing), offering to sell, and selling within the United States, supplying or causing to be supplied in or from the United States, and importing into the United States, without authority or license, Intel products with the infringing features, including Intel processors with a GPU with the Turbo Boost feature (the "Accused Turbo Boost Instrumentalities").

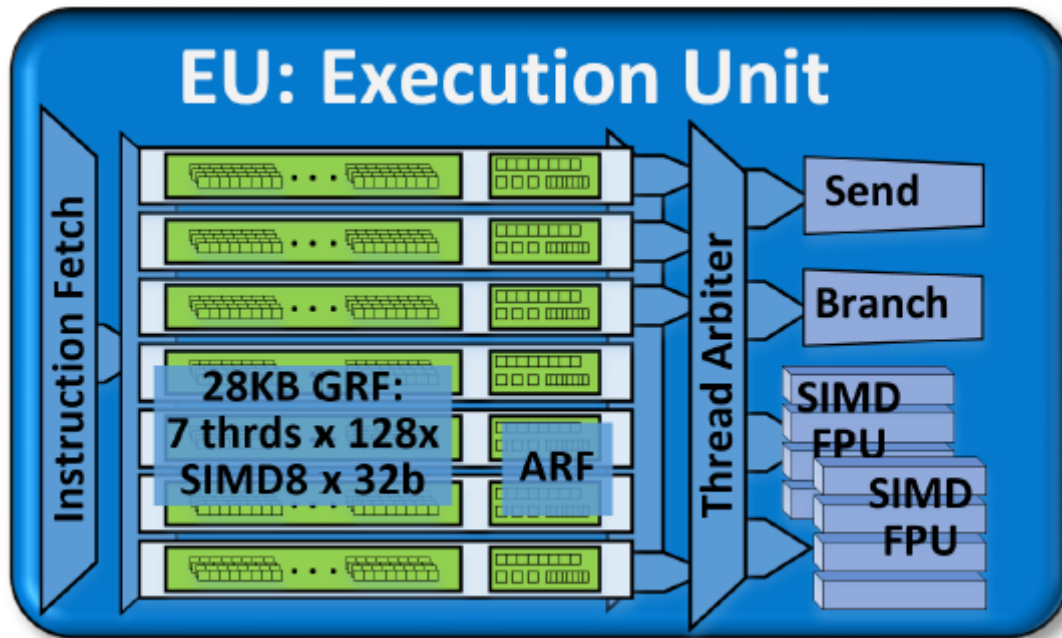
208. For example, the Accused Turbo Boost Instrumentalities embody every limitation of at least claim 1 of the '605 Patent, literally or under the doctrine of equivalents, as set forth below. The further descriptions below, which are based on publicly available information, are preliminary examples and are non-limiting.

"A method for operating a multiprocessor system comprising a plurality of data processing units, each of the plurality of data processing units (a) including at least one Arithmetic Logic Unit (ALU) and a register unit and (b) being adapted for sequentially processing data, the method comprising:"

209. The Accused Turbo Boost Instrumentalities perform a method for operating a multiprocessor system comprising a plurality of data processing units, each of the plurality of data processing units (a) including at least one Arithmetic Logic Unit (ALU) and a register unit and (b) being adapted for sequentially processing data. The data processing units include core processors and graphics processors. Each of the core and graphics processors includes at least one ALU and a register as shown below:

Putting it Together – Core Microarchitecture

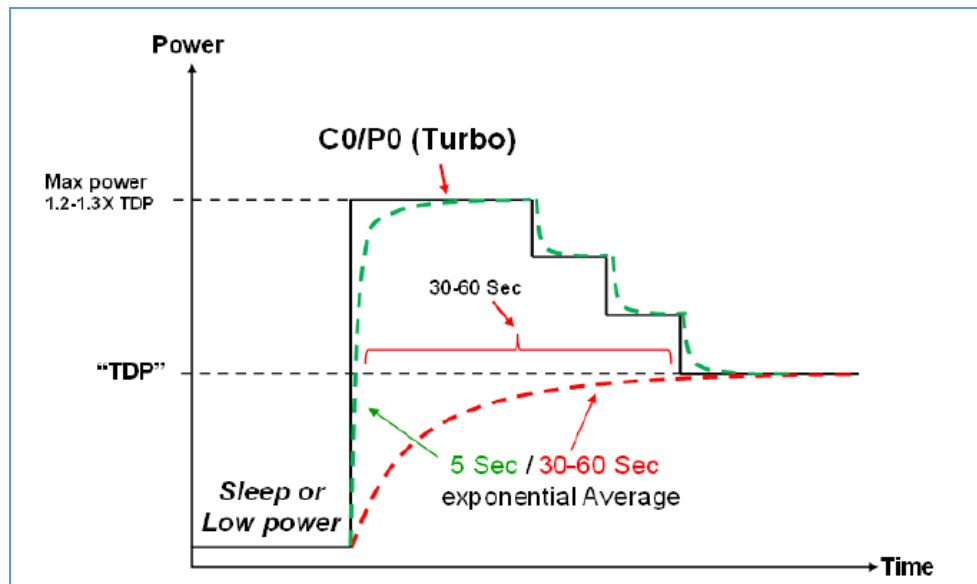




210. The core processors and graphics processors being adapted for sequentially processing data at least with regard to preparing and rendering graphics frames.

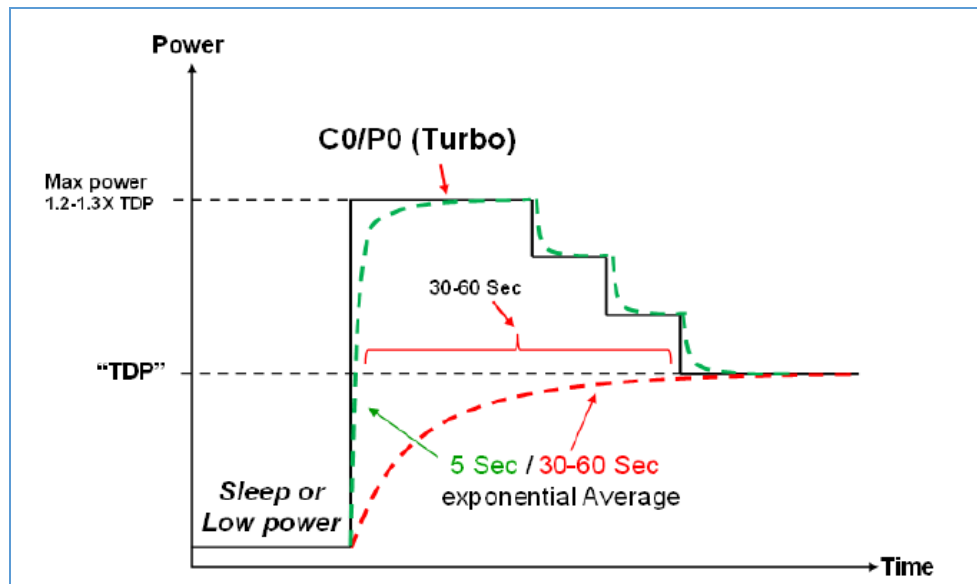
“the multiprocessor system setting a clock frequency, of at least a part of the multiprocessor system to a minimum in accordance with a number of pending operations of a first processor;”

211. The Accused Turbo Boost Instrumentalities set a clock frequency, of at least a part of the multiprocessor system to a minimum in accordance with a number of pending operations of a first processor. For example, the graphics processor(s)’s clock frequency is set to a minimum in accordance with a number of pending operations of core/graphics processor(s) through the Turbo Boost feature shown below:



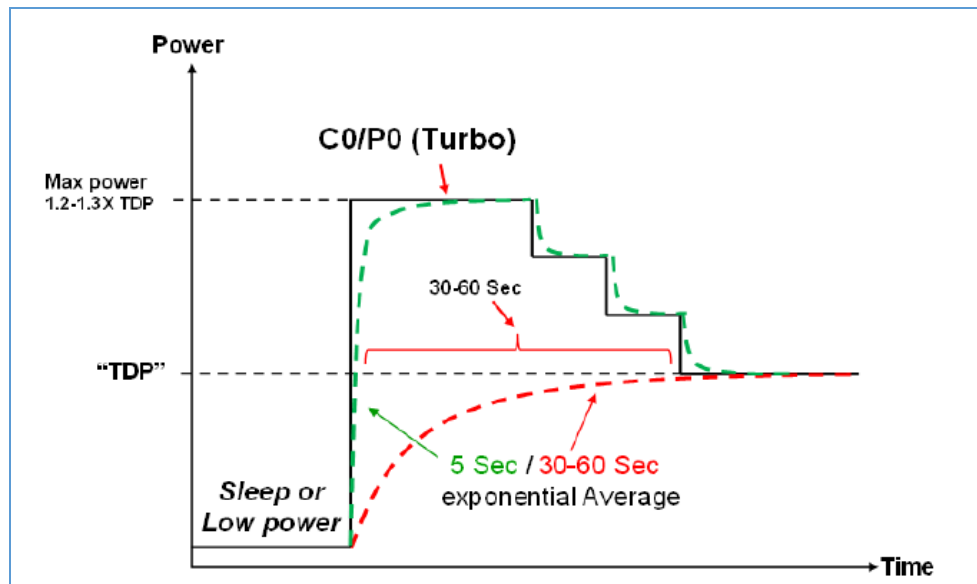
“the multiprocessor system subsequently increasing the clock frequency of the at least the part of the multiprocessor system to a maximum in accordance with a number of pending operations of a second processor; and”

212. The Accused Turbo Boost Instrumentalities subsequently increasing the clock frequency of the at least the part of the multiprocessor system to a maximum in accordance with a number of pending operations of a second processor. For example, the graphics processor(s)’s clock frequency is subsequently increased to a maximum in accordance with a number of pending operations of core/graphics processor(s) through the Turbo Boost feature shown below:



“the multiprocessor system subsequently reducing the clock frequency of the at least the part of the multiprocessor system in accordance with (a) an operating temperature threshold preventing over-temperature and (b) a hysteresis characteristic.”

213. The Accused Turbo Boost Instrumentalities subsequently reduce the clock frequency of the at least the part of the multiprocessor system in accordance with (a) an operating temperature threshold preventing over-temperature and (b) a hysteresis characteristic. For example, the graphics processor(s)’s clock frequency is subsequently reduced in accordance with (a) an operating temperature threshold preventing over-temperature and (b) a hysteresis characteristic, both of which are indicated below:



214. In violation of 35 U.S.C. § 271, Intel has infringed and is currently infringing, directly and/or through intermediaries, the '605 Patent by making, using, selling, offering for sale, and/or importing into the United States, without authority, products that practice at least claim 1 of the '605 Patent. These products include the Accused Turbo Boost Instrumentalities, and any other products that incorporate the Accused Turbo Boost Instrumentalities. Intel has infringed and is currently infringing literally and/or under the doctrine of equivalents.

215. To the extent the method claims of the '605 Patent are also performed by Intel's customers, end users and/or other intermediaries, Intel infringes because the customers, the end users, and/or the intermediaries using the products Intel manufactures can only use said products if using programming steps provided by Intel and under the terms prescribed by Intel, because Intel through its programming and manufactures controls the method whereby users are able to use the infringing processors, and because Intel conditions receipt of the benefit of the accused feature upon performance of the steps of the patented method(s) and establishes the manner and/or timing of that performance, and Intel is thus liable under Section 271(a).

216. On information and belief, PACT asserts that Intel was aware of this patent before this lawsuit was filed, and at least as of the service of this Complaint, Intel had actual knowledge of its infringement of the '605 Patent.

217. PACT is informed and believes, and thereon alleges, that Intel, subsequent to the time it first learned of the '605 Patent and at least as of the time of service of this Complaint, specifically intended to induce patent infringement by third-party original equipment manufacturers (OEMs), customers, and users of the Accused Turbo Boost Instrumentalities and had knowledge that the inducing acts would cause infringement or is willfully blind to the possibility that their inducing acts would cause infringement. Intel has sold and continues to sell the Accused Turbo Boost Instrumentalities to OEMs making OEM products (computers, laptops, tablets, etc.), knowing that the Accused Turbo Boost Instrumentalities will be included in the OEM products and sold to customers in the United States in violation of U.S. patent law, and/or to original design manufacturers (ODMs), knowing that the Accused Turbo Boost Instrumentalities will ultimately be included in OEM products and sold to customers in the United States.

218. Indeed, Intel's "Intel Inside" campaign has informed customers through advertising and stickers on the OEM products themselves that the products contain the Accused Turbo Boost Instrumentalities. Intel also knows that many such OEM products that contain the Accused Turbo Boost Instrumentalities are made outside the United States and are imported into the United States in violation of U.S. patent law. Intel also knows that U.S. customers of the OEMs use the OEM products containing the Accused Turbo Boost Instrumentalities in the United States in violation of U.S. patent law.

219. Intel also publicly provides documentation, including datasheets available through Intel's publicly accessible ARK service and software developer's manuals, instructing customers on uses of Intel's products that infringe the '605 Patent. *See, e.g.,* <http://ark.intel.com>. In addition, Intel specifically advertises and promotes the infringing use of Intel's products, including Turbo Boost. *See, e.g.,* <https://www.intel.com/content/www/us/en/architecture-and-technology/turbo-boost/turbo-boost-technology.html> and <https://www.intel.com/content/www/us/en/architecture-and-technology/turbo-boost/turbo-boost-max-technology.html>.

220. On information and belief, Intel's customers directly infringe the '605 Patent by, for example, making, using, offering to sell, and selling within the United States, and importing into the United States, without authority or license, products containing the Accused Core Instrumentalities.

221. Intel contributes to the infringement of the '605 Patent in violation of 35 U.S.C. § 271(c). As stated above, on information and belief Intel was aware of the '605 Patent before this lawsuit was filed but Intel was aware of the '605 Patent at least as of the time of service of this Complaint. Intel thus offers to sell and sells within the United States the Accused Turbo Boost Instrumentalities knowing that those products constitute a material part of the claimed invention because Intel incorporates the accused components (core/graphics processors with Turbo Boost feature, etc.) into the Accused Turbo Boost Instrumentalities.

222. Intel knows that the Accused Turbo Boost Instrumentalities are especially made or especially adapted for use in infringing the '605 Patent because the Accused Turbo Boost Instrumentalities all contain the infringing components (core/graphics processors with Turbo Boost feature, etc.). Furthermore, because the Accused Turbo Boost Instrumentalities contain

the infringing components (core/graphics processors with Turbo Boost feature, etc.), they are not a staple article or commodity of commerce suitable for substantial non-infringing use.

223. In addition, Intel offers to sell and sells the Accused Turbo Boost Instrumentalities to Original Equipment Manufacturers (OEMs) and/or Original Design Manufacturers (ODMs) who then incorporate the Accused Turbo Boost Instrumentalities into infringing products which are used, sold, offered for sale, and/or imported in the United States in an infringing manner. Accordingly, Intel is liable as a contributory infringer.

224. In the alternative, to the extent Intel does not meet all of the limitations of the '605 Patent by making the Accused Turbo Boost Instrumentalities in the United States, Intel infringes under 35 U.S.C. § 271(f)(1) and (f)(2) by supplying from the United States a substantial portion of the components of the Accused Turbo Boost Instrumentalities (for example, structures or components contained in semiconductor wafers or dies or the like), and actively induces the combination of components outside the United States in a manner that would infringe the '605 Patent (for example, by packaging or assembly, or by incorporation into computers, servers, or the like by ODMs or OEMs). Intel further supplies from the United States components which are especially made and especially adapted for use in practicing the '605 Patent, and not staple articles or a commodity of commerce suitable for substantial non-infringing use (for example, structures or components contained in semiconductor wafers or dies or the like). Intel knows the components are especially made and especially adapted to be combined outside of the United States in a manner that would infringe the '605 Patent (for example, by packaging or assembly, or by incorporation into computers, servers, or the like by ODMs or OEMs). Based on these facts and the facts set forth in the paragraphs above, Intel infringes the '605 Patent under 35 U.S.C. § 271(f)(1) and (f)(2).

225. As a result of Intel's infringement of the '605 Patent, PACT has been damaged. PACT is entitled to recover for damages sustained as a result of Intel's wrongful acts in an amount subject to proof at trial but no less than a reasonable royalty.

226. In addition, Intel's infringing acts and practices have caused and are causing immediate and irreparable harm to PACT.

227. PACT is informed and believes, and thereon alleges, that the infringement of the '605 Patent by Intel has been and continues to be willful. As noted above, at least as of the service of this Complaint, Intel has actual knowledge of its infringement of the '605 Patent. Intel has deliberately continued to infringe in a wanton, malicious, and egregious manner, with reckless disregard for PACT's patent rights. Thus, Intel's infringing actions have been and continue to be consciously wrongful, entitling PACT to increased damages under 35 U.S.C. § 284.

228. PACT is informed and believes, and thereon alleges, that this is an exceptional case, which warrants an award of attorney's fees to PACT pursuant to 35 U.S.C. § 285.

COUNT IX – INFRINGEMENT OF U.S. PATENT NO. 9,170,812

229. PACT incorporates each of the above paragraphs 1-35 as though fully set forth herein.

230. PACT is informed and believes, and thereon alleges, that Intel has infringed and unless enjoined will continue to infringe one or more claims of the '812 Patent, in violation of 35 U.S.C. § 271, by, among other things, making, using (including testing), offering to sell, and selling within the United States, supplying or causing to be supplied in or from the United States, and importing into the United States, without authority or license, Intel products with the infringing features, including the Accused Core Instrumentalities.