

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

<b>LAZER IP LLC,</b>  <b>Plaintiff,</b>  <b>v.</b>  <b>STMICROELECTRONICS, INC.,</b>  <b>Defendant.</b>	<b>Case No.</b>  <b>Jury Trial Demanded</b>
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**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Lazer IP LLC, by and through the undersigned counsel, files this Complaint for patent infringement against Defendant STMicroelectronics, Inc., and in support states, all upon information and belief:

**PARTIES**

1. Plaintiff Lazer IP LLC 6009 W Parker Rd, Ste 149 – 1186, Plano, TX 75093-8121 (“Lazer” or “Plaintiff”) is a limited liability company organized and existing under the laws of the State of Texas and having its office address at 6009 W Parker Rd, Ste 149 – 1186, Plano, TX 75093-8121.

2. Defendant STMicroelectronics, Inc. (“STMicroelectronics” or “Defendant”) is a corporation organized and existing under the laws of the State of Delaware. STMicroelectronics maintains its registered office at The Corporation Trust Company, Corporation Trust Center 1209 Orange St., Wilmington, DE 19801 .

### **JURISDICTION AND VENUE**

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is a corporation organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b) because Defendant is deemed to be a resident of this District.

### **PATENT 6,701,508**

6. U.S. Patent No. 6,701,508, entitled “Method And System For Using A Graphics User Interface For Programming An Electronic Device” (the “508 Patent”) was duly and legally issued on March 2, 2004. A true and correct copy of the ‘508 Patent is attached as Exhibit 1.

7. The Patent disclosed and exemplified a unique and valuable system and method for designing a microcontroller device using a design system having modularized user component modules defining functional components.

8. Plaintiff is the named assignee of, owns all right, title and interest in, and has standing to sue and recover all past damages for infringement of the ‘508 Patent.

9. The claims of the ‘508 Patent are patent eligible under 35 U.S.C. § 101. The claims are not abstract. The claims are directed to a novel improvement in designing devices by providing and using a flexible and customizable architecture that handles compute-intensive design aspects that would otherwise have to be handled by parallel operations. The result are systems and methods of that can be adapted to evolving algorithms and workload needs.

10. The '508 Patent described the prior art systems and methods to modify the contents of a microcontroller, and the difficulties and restrictions in such prior systems and methods. The invention of the '508 Patent included the steps of compartmentalizing the design of a microcontroller by modularizing the various components that create the desired functionality of the microcontroller using a graphics user interface. The system and method include modules which are made available to the programmer who can then retrieve information on selected predefined and pre-configured user modules of the desired microcontroller components. For example, at a high level, Claim 12 and its dependent claims provide for a device editor system that comprises providing a workspace that includes selectable pre-configured modules for programming in a target microcontroller that can be placed in a workspace and providing a pin out workspace for specifying pin out information placed and selected user modules.

11. During the prosecution of the '508 Patent, the Examiner had asserted various prior art. With respect to the last item of prior art cited by the Examiner, the applicant had explained that the claims include, *inter alia*, providing "user modules," and particularly "selectable user modules each pre-configured components for programming in a target microcontroller; providing a user module placement workspace for placing selected ones of said plurality of user modules within allowable hardware resources; and providing a pin out workspace for specifying pin out information placed and selected user modules." The applicant further pointed out that providing the "user modules" was illustrated and defined in the specification, and that providing these modules benefited computer operation:

the user module selection allows a user to select any number of user modules from a catalog of user modules. For example, as shown in Figure 3 of the present application, a catalog of individual user modules is shown in sub-workspace 310. From sub-workspace 310, a user may select a user module to be programmed into a microcontroller. In particular, the user module may be selected directly at the user module selection workspace, as claimed. As

described above, a user module is a circuit design that can be implemented by one or more hardware resources of the programmable microcontroller.

The user module placement workspace allows a user to place the selected user modules according to the hardware resources of the electronic device. Because a user module is implemented by one or more hardware resources of a microcontroller, the user module placement workspace "illustrates the placement of the user module with respect to available resources of the target microcontroller device in a hardware layout graphical display" (page 17, lines 15-17). In particular, the user module placement workspace is useful for presenting a user with a view of the specific hardware resources that a particular user module requires.

The user module pin out workspace allows a user to configure pin selections and drive types. As described in the present invention, the user module pin out workspace allows a designer to "connect internal ports of the system of user modules to external pins" (page 20, lines 26-27).

The three workspaces provided in the claimed embodiments of the present invention provide a useful tool for selection, placement, and pin selection for use in microcontroller design. In particular, each workspace performs a particular independent function, facilitating a particular step of a programmable microcontroller design process.

12. Applicant further pointed out that these claimed system and method steps benefit computer functionality in ways that were not found in the prior art:

Applicants respectfully assert that the components as described in [the prior art] are not user modules as claimed. As described above, a user module is a circuit design that can be implemented by one or more hardware resources of the programmable microcontroller. In order to select and place user modules, as claimed, a corresponding programmable microcontroller having hardware resources is used. Applicants respectfully assert that [the prior art] does not teach, describe or suggest an electronic device configuration system utilizing user modules.

Furthermore, Applicants understand [the prior art] {sic} to system for interactive design and simulation of an electronic circuit allowing a user to design a circuit and view simulation results in the same display window. ... In particular, [the prior art] teaches a system that utilizes a single display window for presenting this graphical information (abstract). As described above, an aspect of the current invention provides a programming application that provides an organized device editor workspace for efficient programming of a microcontroller. By providing three distinct workspaces for performing particular function of the programming application, the present invention facilitates the design process of a microcontroller.

Applicants respectfully assert that [the prior art] in particular does not teach, describe or suggest a device editor sub-system comprising a user module selection, workspace, a user module placement workspace, and a user module pin out workspace as claimed. In contrast, [the prior art] teaches a system for designing and simulating a circuit using a single display window. ....

13. Thus, the '508 Patent claims focus on specific improvements in computer capabilities as opposed to an invention that simply uses computers as a tool. The focus of the claimed advance is on a solution to a technological problem arising in computer operations and provides a specific improvement in computer capabilities or functionality, rather than only claiming a desirable result or function.

14. Further, Claim 12 and its dependent claims, individually and as an ordered combination, recite an inventive concept, which is manifestly more than the application of an abstract idea using well-understood, routine, and conventional activities previously known to the industry. Prior to the present invention, there was no prior art disclosing a system and method for designing a microcontroller device by providing a workspace that includes selectable pre-configured modules for programming in a target microcontroller that can be placed in a workspace and providing a pin out workspace for specifying pin out information placed and selected user modules. Thus, even if somehow the claims were viewed as defining an abstract idea, the claimed unique and novel and unconventional combination of steps transform any abstract idea into a patent-eligible invention. For example, the prior art systems and methods did not include providing a workspace that includes selectable pre-configured modules for programming in a target microcontroller that can be placed in a workspace and providing a pin out workspace for specifying pin out information placed and selected user modules.

#### **COUNT I – INFRINGEMENT OF THE '508 PATENT**

15. Plaintiff restates and incorporates by reference the foregoing allegations.

16. In violation of 35 U.S.C. § 271(a), STMicroelectronics has practiced and continues to make, use, offer for sale, sold and offer for others to use STMCube™, including as an inducement to purchase other STMicroelectronics products. STMicroelectronics states that STMCube™ “is an STMicroelectronics original initiative to make developers’ lives easier by reducing development effort, time and cost. STM32Cube is the implementation of STMCube™ that covers the whole STM32 portfolio. stm32cubemx imageSTM32Cube includes STM32CubeMX, a graphical software configuration tool that allows the generation of C initialization code using graphical wizards. It also comprises the STM32CubeF0 MCU Package composed of the STM32Cube hardware abstraction layer (HAL) and the low-layer (LL) APIs, plus a consistent set of middleware components (RTOS, USB, FAT file system, and STM32 touch sensing). All embedded software utilities are delivered with a full set of examples running on STMicroelectronics boards. The STM32Cube HAL is an STM32 embedded software layer that ensures maximized portability across the STM32 portfolio, while the LL APIs make up a fast, light-weight, expert-oriented layer which is closer to the hardware than the HAL. HAL and LL APIs can be used simultaneously with a few restrictions. Both the HAL and LL APIs are production-ready and have been developed in compliance with MISRA C®:2004 guidelines with some documented exceptions (reports available on demand) and ISO/TS 16949. Furthermore, ST-specific validation processes add a deeper-level qualification. STM32CubeF0 gathers in one single package all the generic embedded software components required to develop an application on STM32F0 microcontrollers. Following STM32Cube initiative, this set of components is highly portable, not only within STM32F0 Series but also to other STM32 Series. In addition, the low-layer APIs provide an alternative, high-performance, low-footprint solution to the STM32CubeF0 HAL at the cost of portability and simplicity. HAL and LL APIs are available

under open-source BSD license for user convenience.” STMCube™ includes modularized user component modules (e.g. various programmed and other predefined user modules) defining functional components (e.g., functional components like signal processing routines, input output type of the module, mathematical functions, etc. corresponding to various modules) (“Accused Product”).

17. Attached hereto as Exhibit 2, and incorporated herein by reference, is a claim chart detailing why the Accused Product constituted and constitutes infringement of the asserted product Claim 12 and method Claim 24 of the ’508 Patent.

18. Defendant’s use of the invention is helpful to the success of its sales of STMicroelectronics’s other product lines.

19. Further, Defendant’s use of the inventions benefited Defendant in that the invention was a material part of overall industry solutions from which Defendant may not have been able to benefit, but for its inclusion of the invention in its overall marketing of all its solutions.

20. As a result of Defendant’s infringement of the ’508 Patent, Plaintiff has suffered damages.

21. Lazer is entitled to a money judgment in an amount adequate to compensate for Defendant’s infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the Court.

22. Lazer has not commercialized any products under the ’508 Patent and has no information that any prior owners of the Patent have not complied with patent marking requirements.

**JURY DEMAND**

Plaintiff demands a trial by jury on all issues so triable.

**PRAYER FOR RELIEF**

Plaintiff Lazer IP LLC respectfully requests that the Court find in its favor and against Defendant STMicroelectronics, and that the Court grant Plaintiff the following relief:

- A. an adjudication that Defendant had infringed the '508 Patent;
- B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '508 Patent, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts; and
- C. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys' fees.

Dated: July 15, 2021

Respectfully submitted by:

*/s/ George Pazuniak*  
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