

## *What Does a Computer Engineering Attorney Do?*

Without electrical and computer engineering, we would not have the modern world we know today. In fields such as these, businesses have invested hard work into developing proprietary innovations, which should be protected. In addition, computer engineering attorneys and IP engineers focus on protecting work and have experience in a wide range of fields, including e-business, telecommunications, digital imaging, and health care informatics.

The [computer engineering attorney](#) works for companies manufacturing computer-engineered devices to negotiate with regulatory bodies or seek or defend patents of computer-engineered products.

### **What is Computer Engineering?**

This field consists of professionals who have "software, systems or network engineering experience." Computer engineers develop computer chips, circuit boards, routers, memory devices, printers, and other electrical and electronic consumer products.

### **Federal Regulation of Computer Engineering Consumer Products**

The federal government regulates many products developed by computer engineers.

#### **Consumer Product Safety Commission (CPSC)**

CPSC regulations children's electric toys and other consumer products. Many laws provide CPSC with oversight, including the Consumer Product Safety Act (CPSA).

#### **CPSA**

The purpose of this law is to protect the public against unreasonable risks from the use of consumer products and to provide consumers with safety information to help them choose whether to purchase a product. Types of products the CPSA regulates include electric walk-behind lawn mowers and refrigerators.

New products frequently are proposed for regulation by CPSC.

#### **CPSIA**

Another law CPSC uses the Consumer Product Safety Improvement Act of 2008 (CPSIA), which was amended in 2011.

This law regulates targeted substances in children's products, defined as those designed primarily for children 12 years or below.

#### **Recalls**

CPSC's major regulatory power is the ability to issue mandatory recalls of products it feels are unsafe. Recent recalls include headphone chargers due to fire hazards, plastic baby toys with choking risks, and mobile hotspot devices due to burning hazards.

### **Opportunities for the Computer Engineering Lawyer in Consumer Products Safety**

A computer engineering attorney can work for large toy manufacturers or other major electronic products firms. Their role is to assist these companies when their products are subject to a mandatory or voluntary recall. It is a conciliatory role rather than an adversarial one.

Recalls can destroy a manufacturer's bottom line, so the computer engineering lawyer works with CPSC to avoid recalling or removing a product from a recall list.

## Environmental Protection Agency (EPA)

EPA's scope covers electronic products containing toxic substances, as well as the Energy Star program.

### Energy Star

This program is a voluntary endeavor that sets energy efficiency specifications for over 70 types of products, including:

- Appliances,
- Building products,
- Foodservice equipment,
- Electronics,
- HVAC systems,
- Lighting,
- Office equipment.

There are reasons a business might be interested in participating in the Energy Star program. There are electricity cost savings benefits, but many millennials are also interested in purchasing only environmentally responsible products.

### Opportunities for Computer Engineering Attorneys with Respect to the Energy Star Program

The Energy Star program is voluntary. For electronic products made by a manufacturer, this company may be interested in receiving this certification for the reasons described above. The computer engineering attorney works for these electronic manufacturers to obtain certification. Like with jobs dealing with the Consumer Products Safety Commission, these positions are focused on negotiation with federal agencies and generally do not involve adversarial responsibilities.

## Federal Communication Commission (FCC)

FCC oversees computer-engineered digital devices that emit radio frequencies. It is unlawful to sell a radiofrequency device unless it meets FCC regulations.

### Authorization Procedure

The FCC has an authorization procedure for products that involve the use or emission of radio frequencies:

#### Verification

This is a self-approval process where the manufacturer can test a device to see if it complies with applicable requirements.

#### Declaration of Conformity

To receive this, a manufacturer must have their device tested by an accredited third-party lab to ensure regulatory compliance.

#### Certification

Based on the verification and declaration of conformity, independent entities called Telecommunication Certification Bodies approve products

Once a device has been approved through this process, the FCC issues an FCC ID number.

### Opportunities for the Computer Engineering Lawyer in the FCC Authorization Procedure

A manufacturer producing computer-engineered devices that use radio frequencies is dependent upon FCC

certification of their devices. Without it, they cannot sell their products. The computer engineering attorney works for these manufacturing companies and guides their technical staff through the FCC certification process. If there are any roadblocks, the computer engineering lawyer engages in negotiation and persuasion with the FCC or Telecommunication Certification Body. The lawyer avoids an adversarial role.

## Food and Drug Administration (FDA)

FDA regulates electronic products that come into contact with food, as well as computer-engineered medical devices.

The Federal Food, Drug, and Cosmetic Act (FD&C) authorize the FDA to develop performance standards "necessary to provide reasonable assurance of safety and effectiveness of medical devices."

FD&C has unique requirements for particular medical devices, such as:

**Mammography equipment:** To be used for this purpose, the equipment must be designed explicitly for mammographies.

**Radiation emitting products:** Examples include x-ray machines, ultrasound devices, sunlamps, and some televisions. These devices must comply with applicable standards and not allow unnecessary radiation exposure when used. Extensive labeling requirements apply.

For a medical device to be sold in the United States, it must be approved by the FDA. There is a lengthy submission process. Opportunities exist for the computer engineering attorney in the field of computer-engineered medical devices.

Typically, available positions are with large companies that manufacture these devices. The computer engineering attorneys work with technical staff and guide them through the FDA approval process. Their job is advisory and transactional - not adversarial with the FDA - because approval status can make or break a manufacturer's success.

## Opportunities for the Computer Engineering Lawyer in Patents

Computer engineers are integral to the development of many new devices that require patents. These are the invention or discovery of "any new and useful process, the machine, manufacture, or composition of matter, or any new and useful improvement thereof."

[Patents in the computer engineering](#) field are very complex. Some recent examples include:

### Neighborhood Determination Methods

"Improved methods and systems for a neighborhood determination in computer-aided engineering analysis are disclosed. According to one aspect, a list of neighbor elements is created for a base element of a grid model representing a structure or an engineering product. The representative node's coordinates of the base element are calculated using the corner nodes of the base element. A characteristic length is assigned to the base element."

### Computer-aided Engineering

"A method, for use in meshing a CAD domain in a computer-aided design (CAD) or computer-aided engineering (CAE) system, comprises carrying out a procedure comprising: obtaining a set of mesh elements by extracting, from a previously-generated mesh of the CAD domain which has undergone a mesh element optimization process in respect of interior elements of the previously-generated mesh, ... to obtain optimized sub-meshes; and obtaining an optimized mesh of the CAD domain by integrating the optimized sub-meshes into the previously-generated mesh."

### Patent Application

A significant opportunity for the computer engineering attorney is to work with an inventor and represent them in the patent application process. It is a difficult and complicated path, and not all lawyers may do this. To apply for a patent, you either have to be the inventor, patent agent, or patent lawyer.

A [patent lawyer must pass the patent bar test](#) and have an educational background in engineering or science. It is not uncommon for a patent application to be rejected. If it has been denied twice, the patent attorney may appeal to the Patent Trial and Appeals Board. If this is unsuccessful, a petition in federal court is possible.

## Patent Litigation

A second opportunity for the computer engineering lawyer in patent litigation. Over 12,000 [intellectual property lawsuits](#) are filed annually. Many of them concern about patent infringement.

This type of lawsuit has two goals. The first is to recover damages, and the second is to seek declaratory relief. In cases involving computer engineering issues, the lawyer represents either the plaintiff or the defendant.

## Role of a Computer Engineering Attorney

In order to protect your computer engineering innovations, the computer engineering attorneys:

Identify how your competitor's innovations affect your product, client base, and business strategy by conducting patent searches and due diligence reviews.

Develop strategies for managing and protecting IP portfolios.

Advice on patent law, trademark law, copyright law, trade secret law, and other areas of intellectual property.

Assist with infringement, validity, and right-to-use issues.

Obtain utility and design patents by preparing and prosecuting applications.

Litigate and defend IP assets.

## How Do I Become a Computer Engineering Lawyer?

A college degree in computer science, computer engineering, or [electrical engineering](#) is an excellent first step.

Then [law school and membership](#) in the bar are required. After this, the lawyer is ready to meet the challenges of being a computer engineering attorney.

### Read these articles for more information:

[What's the difference between Patent Law, Trademark Law & Other Intellectual Property Practice Areas?](#)

[Law Engineering Jobs - Related Job Titles](#)

[Remote Electrical Engineering Attorney Jobs - Related Job Titles](#)

[Intellectual Property Patent-Hard Sciences Attorney](#)