

**B.A. MALLAL MOOT 2021  
PRELIMINARY / QUARTER FINAL ROUNDS**

**IN THE GENERAL DIVISION OF  
THE HIGH COURT OF THE REPUBLIC OF SINGAPORE**

HC/S 33033/2020

**PAM WEE WIT KEE**

vs

**OTTO BORG PLC**

**Coram: PETER CULLEN J.**

*Meelon Usk and William Bertelsen (Deslar LLP)* for the Plaintiff

*Solomon Bao Gong and Gloria Steinem (Folksvegan LLC)* for the Defendant

**DECISION**

1. Can an artificial intelligence be recognized as an inventor under the Patents Act (Cap. 221)? The advancement of technology has brought to life the universe that we had previously contemplated in our imagination and in the movies. When an artificial intelligence is able to create, and that creation has a commercial value, does that artificial intelligence have the right to be recognized as an inventor? That is the question that I had to answer in this case.
2. Pam Wee has registered a patent for the SPAM, short for Super-Personality Augmented Machine. Otto Borg PLC has challenged ownership of the patent. To understand how this came about, it is important to set out how SPAM came to be.
3. In 2015, Pam Wee received an inheritance of a fully restored 1975 Chevrolet Camaro from her grandfather, together with a tidy sum of cash. A PhD in Classical Studies and a software and mechanical hobbyist, Pam had always tinkered with robotics and drones. The inheritance inspired her to work on building a fully autonomous vehicle.
4. Pam Wee embarked on extensive research and studies of autonomous vehicle systems. She read avidly and travelled extensively to study the available prototypes. In 2017, she found an Autobot system developed by a little known company in South Africa called Otto Borg PLC. The Autobot system mimicked many of the features available in cars today : forward collision warning, auto-brakes, lane departure warning, blind spot warning, adaptive headlights, adaptive cruise control, backup sensors and cameras, voice control, tire pressure warning and electronic stability control.
5. What attracted Pam to the Autobot was that it included a personality suite where users could indicate their preferences in the manner of driving. The different driving preferences were intended to reflect the personality of the driver, ranging from a careful and low speed mode

which was called the “Miss Daisy” to “Transporter Normal” to “Transporter Defensive” to “Fast and Furious”. The different settings enabled the driver to rely on a set of pre-arranged preferences for the average cruise speed, distance between vehicles and parking preferences.

6. In its first limited release, the Autobot required purchasers to bring their vehicles in for customized installation. Pam negotiated with Autobot and although she paid the full price, she received only the Autobot software and detailed instructions on installation.
7. Ignoring recommended installation instructions, Pam installed the Autobot on her Camaro after assembling a series of on-board computers from components that she had scavenged, salvaged and purchased online, including modified motherboards that she soldered herself. She added new features to the programming, inserting her own codes to improve the performance of various components of the Autobot system, including the voice recognition software. Pam paid special attention to the personality programming, getting the voice recognition software to initiate conversations and give verbal warnings. As she improved on the programming, the Camaro was able to plot her route based on her preferences, and speak to her as she was driving, encouraging her to drive faster, change lanes or a take a route that enabled her to exceed the speed limit with a lower risk of detection.
8. In a fit of pique, she programmed two personalities, one that showed aggressive driving tendencies and the other a far more careful and cautious driver. She called one Paul Walker and the other Hoke Colburn. Then she painted the Camaro a bright yellow and called it HoneyBee.
9. One early morning in 2018, Pam drove HoneyBee to a deserted road in the Lim Chu Kang area. Then, using a series of voice commands, she tested the Paul Walker function. To her delight, the functionality was as thrilling and exhilarating as she had dreamed it would be. After an hour of thrills, she decided to take it easy on her way home and commanded HoneyBee to drive her home in Hoke Colburn mode.
10. In video footage captured by the on-board camera and microphones on HoneyBee, a voice resembling that of Samuel L. Jackson is heard responding to her voice command with a strong southern twang, “Ain’t no way I’m going to drive you home that way, Miss Daisy. We know you like the thrills and we aim to please. So buckle up and let’s yee-haw outta here.” HoneyBee then sped up to 120 kmph within a minute and slowed to a stop in less than 2 minutes.
11. There was much burning of rubber, but as a sign of the extreme sophistication of HoneyBee, the vehicle did not flip, and instead came to a complete stop. Pam suffered severe spinal cord injuries. She ended up wheelchair bound. HoneyBee was unscathed.
12. Undeterred, Pam continued to work on HoneyBee. Her injuries had been caused by Hoke Colburn’s voice over the Paul Walker functionality, which intrigued her, as it was getting closer to her ultimate goal. She discovered that the codes she had inserted had unlocked functionalities that were already built into the Autobot software, including a narrow artificial intelligence that had been developed by Otto Borg PLC, which was intended to be rolled out at a later stage. This narrow artificial intelligence, using the hardware she had built, and with her additional coding, had created the personality that had overridden her voice commands, interpreting her excitement at the success of her experiments as a desire

to continue with thrill seeking. The same system had also determined her fear when it accelerated too fast, and had slowed down suddenly to alleviate her fear.

13. Pam was very excited at this new development and worked on it further. Her ultimate goal was a system that could take over all the driving and navigation functions. She wanted HoneyBee to be able to have conversations with her while travelling, take over the route planning and driving based on what it knew of her mood and preferences, and play music or chat with her, again depending in her mood and preferences.
14. Pam filed a patent application for SPAM, which is described as an autonomous vehicle control system with an interactive personality. She names herself as the sole inventor.
15. Otto Borg PLC has filed an opposition to the patent application, seeking to be included as a co-inventor on the basis that it is the owner and creator of the Autobot artificial intelligence that Otto Borg claims is the inventor of SPAM, or at the very least a co-inventor.
16. In view of the important question of law posed, the Registrar of Patents has directed parties to invoke the powers of the Court under s.91 of the Patents Act. In their affidavits, it is agreed that SPAM satisfies all the requirements for a patent, in that it is new, involves an inventive step, and is capable of industrial application.
17. Pam's argument is that Autobot cannot be named as a co-inventor as it is not a "person" and therefore not capable of holding proprietary interests, which is the purpose of naming an "inventor". Pam further argues that even if Autobot is named as a "co-inventor", it does not follow that Otto Borg has any rights to SPAM, as Autobot is not a separate legal personality.
18. Otto Borg PLC's argument is that Autobot is a co-inventor by the admission of Pam, and as the owner of the Autobot, Otto Borg PLC is the appropriate legal entity to share the patent rights.
19. This question of whether an artificial intelligence can hold intellectual property rights has been canvassed in many jurisdictions, mainly from the attempts by Dr Stephen Thaler, CEO of Imagination Machines to obtain patent protection by attributing a patent to an artificial intelligence he calls DABUS. It is timely that this question is considered under Singapore law.
20. The question turns on the meaning of "person" in s.19 of the Patents Act. "Person" under Singapore law has always been defined to refer to a natural person or a legal entity, or the government. In that regard, Singapore law is in pari materia with UK law. Irrespective of the actual process by which an invention comes about, the process of patenting is about the protection of that invention for the purposes of industrial and commercial exploitation. For that reason alone, it is imperative that the granting of patents rights must be made only to "persons" that are capable of owning property, and exercising rights over that property. Irrespective of how advanced an artificial intelligence is, until the legal system recognizes an artificial intelligence as an entity capable of exercising rights of property, a patent cannot be registered under an artificial intelligence.
21. The recognition of an inventor similarly carries with it proprietary rights. There is no

“moral right” in an invention when it comes to artificial intelligence. An artificial intelligence has no morality. Hence I also hold that an artificial intelligence cannot be named as an inventor.

22. The legal entity that owns the software that gives rise to an artificial intelligence cannot, without more, be named as the inventor of something created by that artificial intelligence. The legal system is not equipped to recognize ownership rights over artificial intelligence, as there has not been sufficient exploration of the nature and limits of artificial intelligence. It seems to be morally repugnant to consider ownership of artificial intelligence, if artificial intelligence creates sentience.
23. The recognition of rights of an artificial intelligence must not be developed through case law, and is best left to Parliament, so that there is sufficient debate about the implications of recognizing proprietary rights of an artificial intelligence.
24. SPAM must be registered in the sole name of Pam Wee, and Otto Borg PLC has no right to be recognized either as a co-inventor, nor as a joint ownership of SPAM.

PETER CULLEN J.

30<sup>th</sup> March 2021