# 1) Covihood (2020)

The covihood was a device modelled as a modification of the aerosol box which provided an additional layer of protection to health care personnel during the early days of the Covid 19 pandemic.

The Covihood was a polycarbonate device with 3D printer components that had a unique hexagonal shape (unlike all other cuboid aersol boxes) that offered better ergonomics and utility for a variety of airway related procedures on the patients.

The salient features that were unique to the covihood were.

1) Angulated viewing plate that offered clear vision towards the patient and the airway.
2) Glove mounting rings upon which regular latex gloves could be placed in a manner in which the hand entry ports were completely sealed off.
3) Design that would allow the box to fit snugly on narrow operating room tables.
4) 4 hand ports for access, allowing for assistants to also place their hands in to help with suction, cricoid pressure etc.
5) Viral filter mounts to effectively clear lingering aerosol particles before removal of the hood.
6) Strategically placed 'Bougie port' to allow for passage of a bougie during difficult intubation.
7) Anesthesia ventilator circuit could be connected externally into the box.

Additionally, the Covihood provided the ability to perform fibreoptic bronchoscopic intubations which were initially deemed highly dangerous in covid 19 patients. The 4 access ports allowed for tracheostomies to be performed. The free ergonomics also allowed for a supraclavicular nerve block with ultrasound to be performed in a suspected covid 19 patient, a case report of which was published.

Kulkarni RR, Stephen M, Shashank A, Mandhal LN. Novel method of performing brachial plexus block using an aerosol box during COVID-19 pandemic. J Clin Anesth. 2020 Nov;66:109943. doi: 10.1016/j.jclinane.2020.109943. Epub 2020 May 30. PMID: 32504967; PMCID: PMC7260545.

The covihood holds an indian patent No: 202041018674) and was published in the Patent Office Journal No. 45/2021.


PATENT PENDING
CoviHood
IN RESPONSE TO COVID-19
OCTORITE
TECHNOLOGIES
WITH
Dr. Amjad Manier
PATENT PENDING


TECHNOLOGIES


PATENT PENDING


PATENT PENDING
TECHNOLOGIES


HMEF 1000 Strip

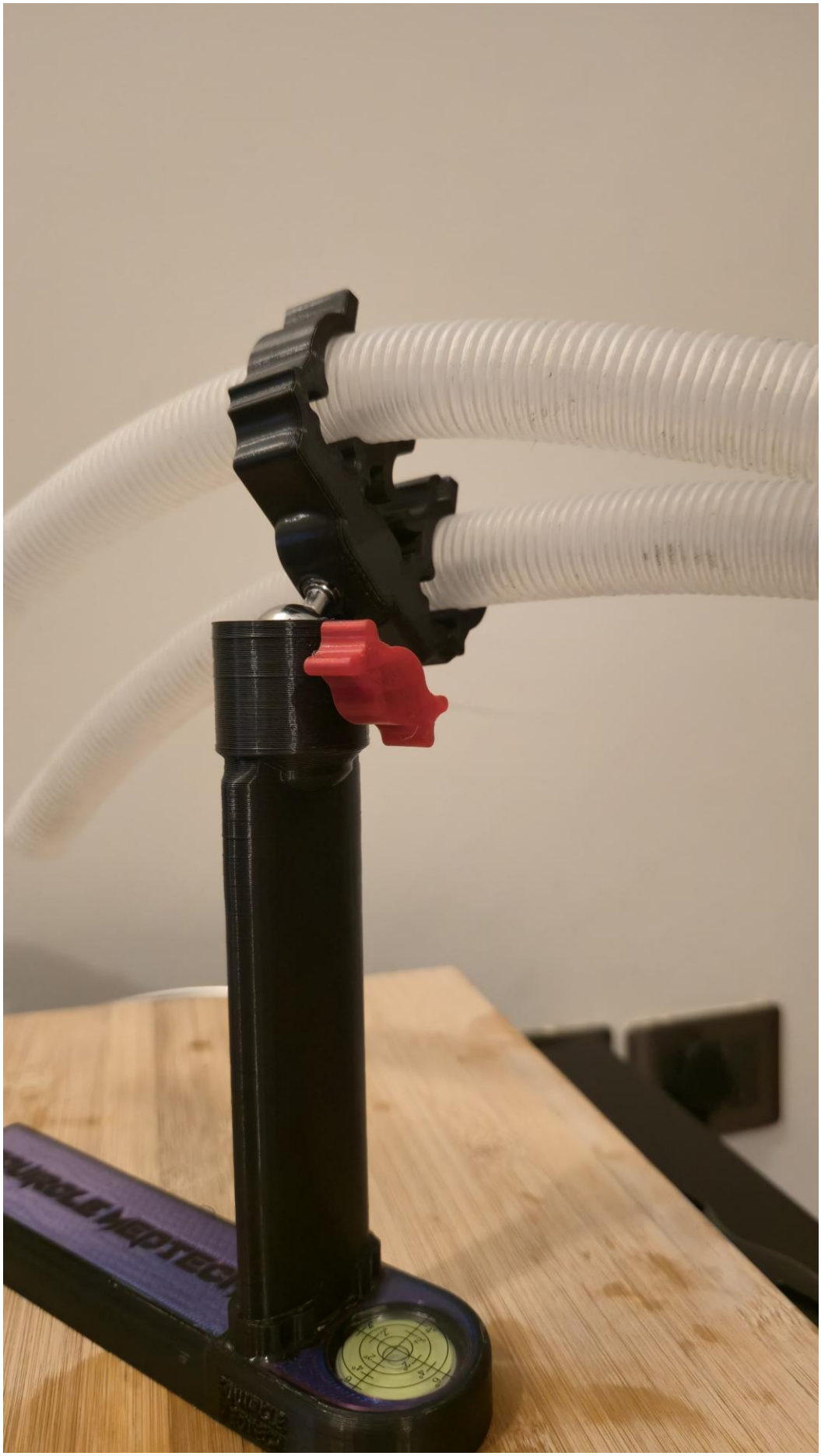

PATENT PENDING

# 2)The Graspberry (2025)

The Graspberry is a simple and resilient device used to support the ventilator tubings, thereby preventing dislodement of the airway device due to undue traction. The Graspberry is a modern day evolution of  the  welll known ‘L Board’.

The Graspberry is a completely 3D printed device made out of flexible and unbreakable thermopolyurethane. It gently ‘grasps’ the ventilator circuit iin whatever angle it emerges from the intubated patient. The holder of the circuit can rotate 360 degrees and ‘catch’ the ventilator circuit in any angle. The holder accommodates both adult as well as pediatric circuits. In addition, the Grapberry has a bubble level indicator that shows the level of the operating room table. (Whether it is tilted left or right, or is inclined in trendlenberg or reverse).

The graspberry has received design patent from the  patent office, Goverrntment of india.

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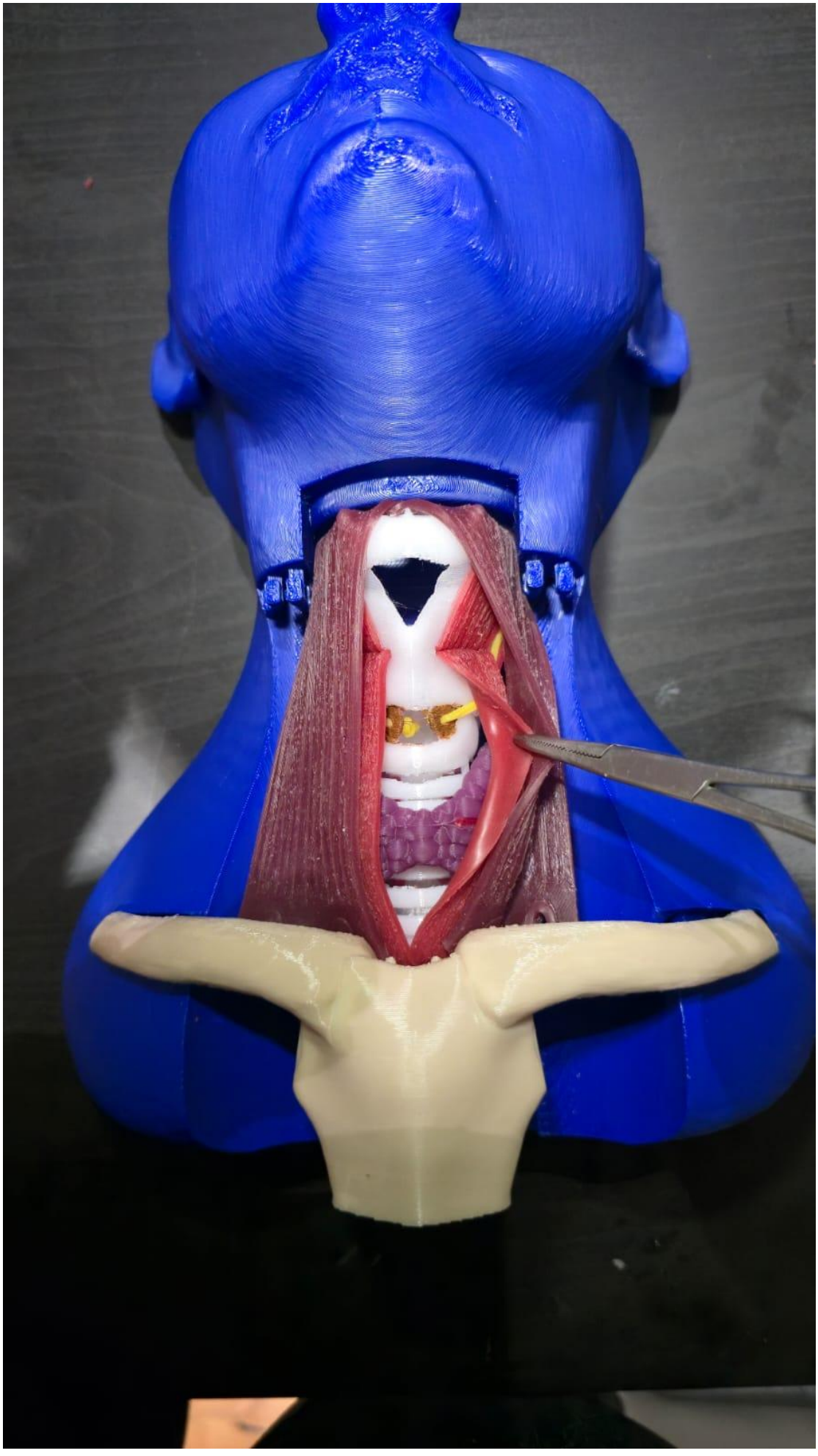
SQUIRCLE
MEDTECH

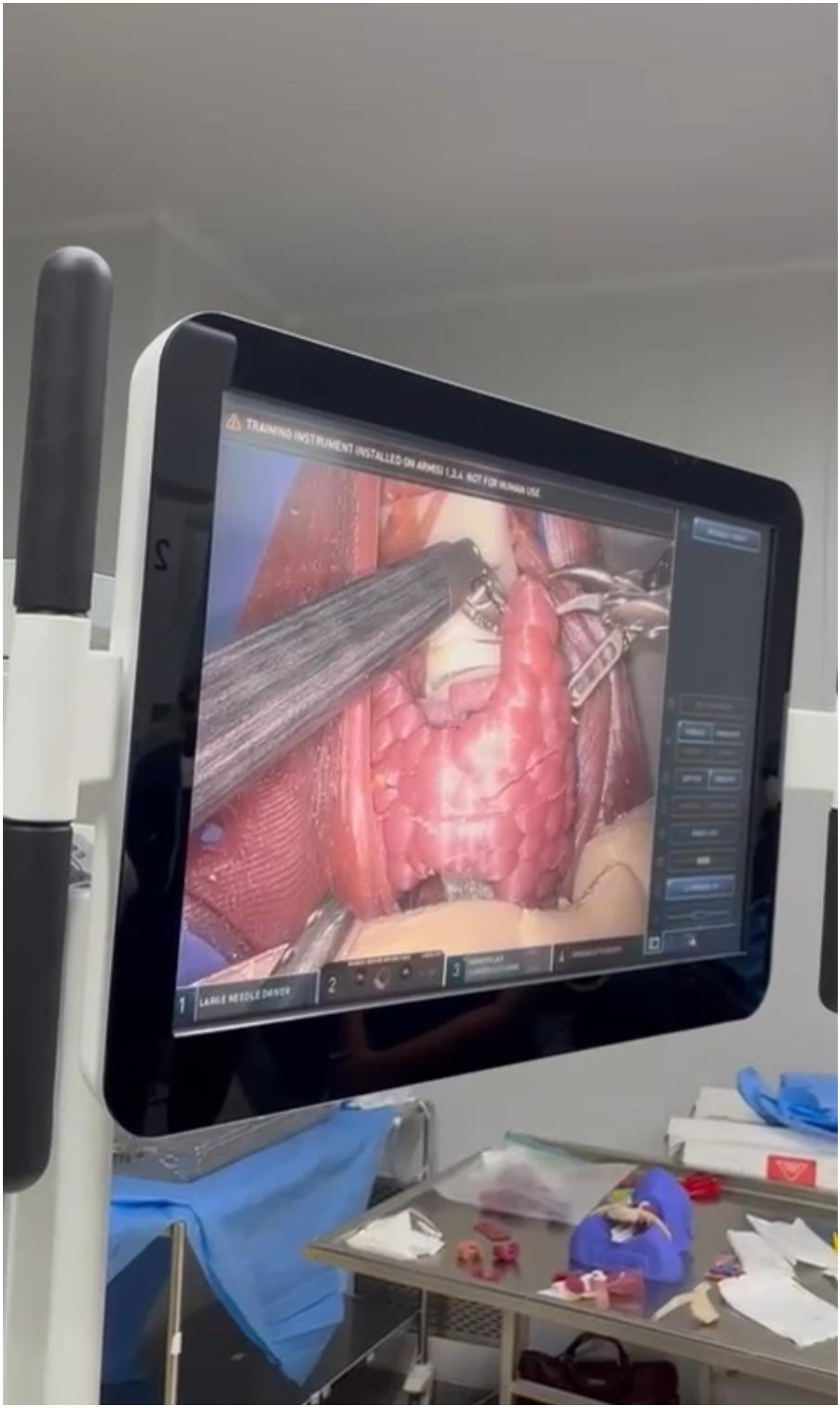
# 3) The Nexim – Robotic Thyroidectomy Trainer 2025

The Nexim is a surgical training simulator designed to simulate specific stages of minimal access robotic thyroidectomy. It features a 3d printed head and neck model with a removable trachea and larynx. Vital structures such as the muscles, vasculature, nerves and the thyroid gland itself are created from silicon. These structures are anatomically correct in their location and size. The entire simulator is placed under the robotic box trainer and the trainee uses the robot to retract the muscles and dissect out the thyroid gland by cutting through the structures. The trainer attempts to give the trainee a perspective of getting used to the surgical robot by performing typical surgical manoeuvres. The Nexim is a cost effective approach to surgical training with robots. The Nexim has been used in workshops for robotic thyroidectomy and has been displayed in surgical conferences in India, Korea and Japan.




TRAINING INSTRUMENT INSTALLED ON ARMS!! 1.3.4. NOT FOR HUMAN USE


reception


TRAINING INSTRUMENT INSTALLED ON ARM(S) 1,3,4. NOT FOR HUMAN USE
1 LARGE NEEDLE DRIVER
2
3

# 4) The I-O Axess (2025)

Designed to provide trainees with a simulated feel of gaining intraosseous access in pediatric patients. The I-O Axess simulates the feel of palpation of the tibial ridge and the consequent action of introducing or drilling a needle into the bone. The tibia in this model has been designed to feel similar to a pediatric bone when the needle is being passed. Once the needle has been placed in the intramedullary canal, aspiration of blood indicates correct placement.

# 5) The Adhesive Flag technique of catheter fixation (2025)

Maniar A, Kulkarni R, Areti A. A simple and effective "adhesive-flag" fixation method for perineural catheters. Indian J Anaesth. 2025 Oct;69(10):1091-1093. doi: 10.4103/ija.ija_833_25. Epub 2025 Sep 5. PMID: 40979768; PMCID: PMC12445751.

Published in the Indian journal of anaesthesia, the adhesive flag technique was described as a simple and highly effective method to secure perineural catheters without using fixation devices or sutures. Essentially, it involves using two Tegaderm dressings to secure the catheter. The first Tegaderm wraps around the catheter like a flag, thereby increasing the surface area of the catheter to get a good hold. The second Tegaderm is stuck upon the first catheter and over the skin. This provides a good bond, making the catheter difficult to be dislodged inadvertently.