

MAY 2020

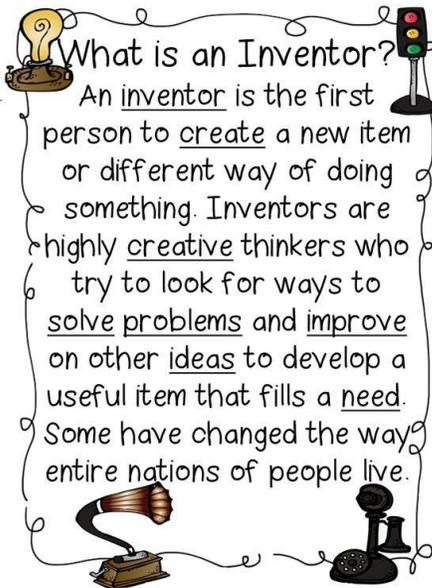
The Newsletter of the Institute of Inventors and Innovators

III – A non-profit organization. A home for inventors. Run by inventors. Supporting inventors.

III – South Africa Business Award Winner – MEA Markets 2019

<https://www.mea-markets.com/latest-issues/>

For your diary ... don't let your pages go blank.



◆ **Eureka!MEET and Face-to-face Pitch it to the Panel** sessions have been put on hold for the moment but we will let you know as soon as they start up again. We are processing membership applications and PITTP bookings anyway and as usual, so be sure to reserve your PITTP seat – feel free to communicate, telephone or email – we are open!



Main ideas in this issue:

- ◆ IFIA recognises Inventors worldwide.
- ◆ Further info on relaxation of I P registration dates
- ◆ Heron of Alexandria
- ◆ S A Invention – Drones plant trees to aid deforestation
- ◆ Grant Snider on Coping.

When it comes to Inventors, Innovators and creative thinkers, this definition alongside is simple and sweet, and it defines and describes the function nicely.

BUT who knows who has invented anything?

South Africa has been a member of the International Federation of Inventors Associations (**IFIA**) since 2015 and while **IFIA** offers a multi-faceted global service to its country members, one of the latest projects (which was recently launched) is that of **the Inv. Membership for the inventors**. This was approved by the **IFIA** ExCo at the 33rd **IFIA** Virtual meeting held in February 2020.

Essentially this project will assign the title INV to inventors. Think about this for a moment. Titles help to differentiate qualified and competent professionals - when we read Dr. or Prof. or Eng. or Arch we know that we are dealing with a professional. How is an inventor rewarded for the years of work that have gone into commercialising an invention? By assignment of the title INV to the inventors, and individual paid membership of **IFIA** ... that's how.

This will now be institutionalised, whereby Inventors and Innovators are recognized based on their proven competency and track record.

The standard **Inv** membership fee is \$160 for the first year (renewal fee of \$50) but this amount has been reduced for under-developed and African countries (that includes us!) where it has been set at \$100 for the first year (\$50 renewed annually).

Follow this link <https://www.ifa.com/inv-members/> for full details and if you are interested, let us know and we will help you get there.

Are you worried about the effects of lockdown on your patent deadlines?



'Time waits for no man' they say – it is relentless and carries on unscathed by the Corona virus and friends. The thing is though, time has to be put on hold somehow for very many reasons but specifically patents.

Before anyone else, the Chairman of III, Ken Hawksworth realised the implications of the lockdown (etc.) on intellectual property and jumped into action on 25 March. The III contacted the International Federation of Inventors Associations (IFIA) to suggest global action be taken to assist all inventors and innovators everywhere. IFIA reacted immediately and having forwarded our letter to the President of IFIA responded in the best way possible. They took action as promised and under the signature of IFIA president contacted the heads of UN agencies, international organizations such as WIPO and other organizations like EPO, USPTO and many others.

Go here to read the response of the United States Patent and Trademark Office

<https://www.ifia.com/news/uspto-suupport-inventors-and-entrepreneurs/>

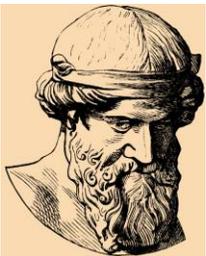
This idea mirrors a lot of what will be happening across the world but the subject of time delays is very complicated and sensitive. Not every country is in lockdown for instance (and there are many other aspects to consider), and because something like this has just not happened before, rules and policies are being discussed, agreed and written 'on the run'. The fallout will be considerable.

Initially the South African Patent Office confirmed that they would be operational but then the CIPC announced that it will be closed from 26 March – 30 April 2020 in compliance with the government lockdown requirements. As soon as there are any changes we will let you know.

In the meantime the CIPC has declared all of these days '*dies non*' and that any I P deadline falling within this period will automatically extend to the first day of their re-opening.

Please contact the Institute on info@iii.org.za **if you wish to be added to our active inventors' mailing list**. Please put **Active Inventor** in the subject line and add your name and membership number.

Read about famous inventors they tell us, because by reading about how important inventions were created, you will be better able to work through your own discouragements and feel more confident about eventual success with your own inventions.



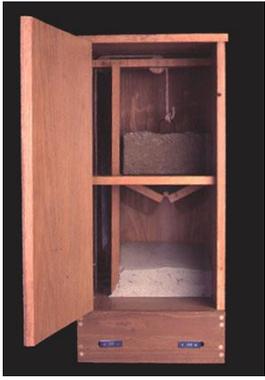
Heron of Alexandria as he is known, c 10-70 AD, was born in Alexandria (!) That's around 2000 years ago ... and if you do read more about him you will see just how much of the work he did still impacts life today. It seems that he and Leonardo would have stood in the same queue.

He was a mathematician and engineer (and a lot more besides) who is considered one of the greatest experimenters of antiquity and a truly great inventor.

Heron was also precise in dictating the types of materials that should be used to make any machine he invented function properly. For instance, he designed several mechanical devices to simulate temple 'miracles', including a device attached to the temple door which made a trumpet play when the door was opened. He also invented a coin-operated holy water dispenser, and a device for opening the temple doors using heat and water power. Look at this very short clip – it's interesting.

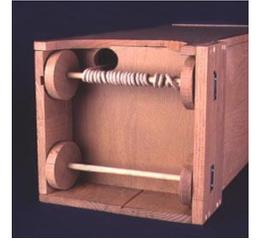
<https://www.youtube.com/watch?v=JPv3j6y5zHU>

Using similar thinking, Heron's self-moving theatrical stand indicates not only his interest in the theatre, but also his special fascination with automata iow robots. For example the contraption shown below was able to move across the stage, in different directions and seemingly by itself. He designed variations on the one shown here as well, such as stands that carried mechanical puppets and even stands that included their own miniature theatres. One of these would roll onto stage before a show, the doors would open and close by themselves, tiny altars would light up and mechanical figures



would move about, and then the stand would roll off the stage much to the entertainment of a fascinated and often disbelieving audience.

The secret of Heron's self-moving stands was gravity. A large weight connected to the wheels by ropes and pulleys and gears rested on top of a container of grain or sand. As the sand flowed through a sinkhole and into a compartment below, the weight would sink, making the ropes taut and turning the wheels in the interior. The process could be altered by using different amounts of sand, depending on how long a performance was desired. Ingenious.



This South African invention allows drones to plant hundreds of trees in minutes

Two drone enthusiasts, South African Andries Louw (a certified drone pilot) and Australian Andrew Walker (a mechanical engineer) invented a device that allows drones to plant large numbers of trees in minutes using a pneumatic firing module that shoots seeds into the soil.



Two seeds per second are fired from a single drone at velocities of between 150 to 300 metres per second. This translates into around 7200 seeds an hour times the number of drone pilots working and the number of hours worked.

The first module was built in a garage in Hermanus, but since then Louw and Walker co-founded their company AirSeed Technologies with offices based in Cape Town and Sydney. They are using their technology to address deforestation which, after burning fossil fuels, is the second-leading **cause of climate change**. Further, deforestation accounts for nearly 20% of all greenhouse gas emissions — more than the world's entire transport sector.

A recent study found that planting trees could be an effective way to address this. According to the calculations of researchers at the Crowther Lab in Switzerland, hypothetically, nearly 1 billion hectares of land on the planet could get covered with new trees. That vast reforestation would increase the earth's forested land by a third, and because trees naturally absorb carbon dioxide from the air, those additional forests could lower the concentration of carbon in the atmosphere by some 25%.



Louw and Walker believe a fleet of AirSeed Tech drones could plant 100 million trees a year from 2023. "Reforestation is where everything starts. Worldwide there is a deficit of 14 billion trees a year, which equates to 1.26 million metric tonnes of lost carbon sequestration every year," said Louw.

An average tree costs R30 to plant in Africa and the cost is so high because most of the work is done in remote areas which are hard to reach and even harder to plant by hand. An average

hand planter manages around 800 trees a day, said Louw. He suggests AirSeed Tech could reduce this cost by as much as 70% using their drones and their seed pods.

It's not the first time seed-planting has been done by air, or by drones, but the success rate of germination in the past was comparatively low (germinating the seeds took between 3 months to 2 years, depending on the tree) and then, says Louw "...payloads were limited to 150 seeds per flight due to the weight of the pre-germinated seeds."

AirSeed Tech designed a carbon seed pod made from a soil additive called biochar to make them lighter. This highly compressed charcoal is made from the thermochemical conversion of biomass. The balls come out looking like black paintball bullets. They're strong and lightweight (around 5 grams) which means there can be up to a thousand seeds in a single payload.



By compressing the carbon seed pods into the soil additive biochar, the pods act like a natural fertiliser as well as meet other needs. They also don't need to be pre-germinated, they don't need to be buried deeper than 2.5 cm into the ground and they can be dropped onto the soil. Every time a pod is planted, its GPS can be logged which allows success rates of germination to be monitored and measured.

The only feasible way drones can have the necessary impact in reforestation, though, is with swarming technology, which allows a single drone pilot to operate multiple drones simultaneously.



However, South Africa won't be seeing seed-drones operating anytime soon because current South African aviation laws prohibit swarming. AirSeed technologies therefore opted to take their manufacturing to Australia, where swarming has been demonstrated and is permitted and the drones can be legalised within 3-6 months. Both 'Podder' module and carbon seeds are under patent application.

We reap what we sow, so let us reap what we sow.

There is a great deal more to learn about this fascinating subject, a real solution to a real problem.

It is well worth going to the AirSeed Technologies website <https://www.airseedtech.com/> There is a 5 minute video on the home page which explains it all...

Then visit their Face Book page, it's one of the best we've seen ...

Then go to the link below for about 2 minutes to see why you need a driver's licence for a drone!
<https://www.airseedtech.com/media?pgid=jt4yc8hn-c4b81342-d81b-4d7e-8f16-e0490508aee0>



Marco Tempest is a Cyber illusionist who uses technology and an array of special effects, to develop immersive environments that allow viewers to experience the magic of technology. Follow the link below to a **TED** talk to see what he does with drones. It's magic!

https://www.ted.com/talks/marco_tempest_a_swarm_of_mini_drones_makes_magic?utm_source=newsletter_daily&utm_campaign=daily&utm_medium=email&utm_content=button_2020-01-10#t-218145

In case you didn't know...



Mountains or hills have been around forever, but most are relatively young. If you take the Himalayas, for example, they are only about 50 million years old, and if you compare that with the age of the Earth, about 4.5 billion years it puts that figure into context. Another way to understand this is that if the Earth were a human, the Himalayas would be a one-year-old baby. So, here's the 'did you know part' - the Barberton Makhonjwa Mountains in South Africa are the oldest on Earth: about 3.6 billion years and they were declared a World Heritage Site by UNESCO in July 2018. Now. How will knowing this help you invent? We don't know. Sourced and adapted from www.wordsmith.org Mar 30 2020

★ Membership Renewals

This is a reminder that all members **who have not renewed their fees** since March 2019 should do so. As



a non-profit organisation **we are dependent on our loyal members** to sustain our efforts to communicate and promote the relevance and importance of what the Institute does. Since this will **be the last time you will need to renew** (you will remember the Executive

decision to offer LIFETIME membership to all who joined from March 2019), you will be supporting invention and innovation by paying R350 this one last time. Please go to the website to renew you details and as soon as all is in order a Certificate of Membership will be sent to you. The **membership number** that you will be given will **enable you to access members' only** areas of the website (and other services).

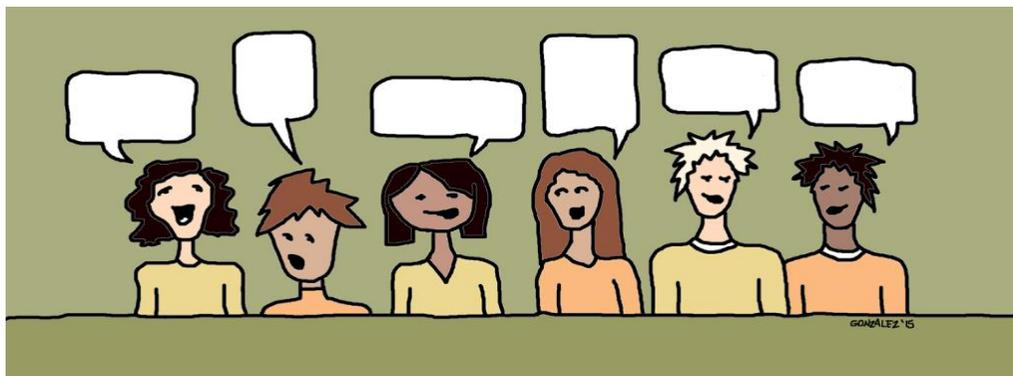
★ Become a Member!

There are a lot of very bright people around. If you are not a member – JOIN NOW! It's easy – just go to the website, visit the membership page, read all about it, fill out the form and submit it from there.

★ Membership Certificates

Are you a member and **not yet received your membership certificate**? I am personally acquainted with the person responsible for this so please send an email with your details and amends will be made forthwith! celeste@iii.org.za

PITCH IT TO THE PANEL – NEXT DATE TO BE ANNOUNCED



Each of our Panelists has expert knowledge to impart and guidance to offer an inventor with an idea that needs to be developed.

And they will do so at the next PITTP meeting. You should book now so that when the date is announced your name will come up first. There are only 7 places on the day, so

make sure one of them is yours. Go to www.iii.org.za for information and your booking opportunity.

Book your place anyway, ensure you have a seat.

Voltaire said **“Perfection is the enemy of the good.”**

Is 'good enough' good enough and how much have we lost by being obsessed with being perfect? Use this short TED talk to make you think about your approach to your ideas, inventions, solutions and more... perhaps good enough is good enough?

https://www.ted.com/talks/charly_haversat_perfectionism_holds_us_back_here_s_why?referrer=playlist-how_perfectionism_fails_us

★ **How are you coping? Grant Snider has some ideas on how to use your lockdown time!**

As the well-known psychiatrist Victor Frankl once said, **“When we are no longer able to change a situation, we are challenged to change ourselves.”** We are all struggling now. And probably still bewildered even though we now understand the corona situation a lot better. See, it doesn't rate a capital letter. corona.



There's so much calling that during lockdown, quarantine and isolation cannot be answered. We have to stay home to stay safe. We thrive on company; we love to chat and socialise; we need extended family connections; we need the freedom to do what we want to do and when we want to it, but we can't; we need things from the shops we can't get; we have to put on hold our greater 'to do' lists because we don't have the means to do a lot of anything right now.

Much about how to cope has been written, covered on the radio, on social media and the 'net and what do they all say? Be grateful for what you have, very many others have so much less. Create a comfortable, productive and dedicated workspace. Keep up your routines (get dressed, keep office/school hours), take breaks. Breathe. Breathe. Breathe. Stay connected to the people in your life in any way including Skype, Zoom, WhatsApp and Face Book. Set time aside every day for what needs to be done. Children, Spouse. Self. Friends. And keep trying. Get ready for the new normal, it's here.

It's challenging to stay positive. Some days are better than others. It is not unusual to cry, feel deflated, frustrated, angry, sad or helpless. You know all this and so much more because we each have our stories. Remember, you may be isolated but you are not alone. Other inventors know this too.

INVENTION AND INNOVATION HAVE NOT BEEN CANCELLED.

Stay home. Stay safe.

KEEP WORKING YOUR IDEAS.

In the meantime did you see this newsletter from **Inc?**

https://www.inc.com/sharon-poczter/why-innovators-inventors-will-solve-this-crisis.html?icid=readmoretext_ab

The lockdown spoiled our fun because we don't think too many people were thinking of going to Keith Kirsten's to purchase their artificially intelligent garden gnomes – especially one that trimmed back trees and shrubs too enthusiastically! Nope, while some were out buying tins and more tins, others were wondering what 'lockdown' actually meant. Anyway, admit it now – did you get caught? Did you hesitate and think “Hmm, interesting.”



After all, it was April and sloop lirpa (april fool backwards) rules then ... okay. Smile now!



The Next Eureka!NEWS will be out by 5 June ... look out for it.

Greetings to you all.

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THE INSTITUTE OF INVENTORS AND INNOVATORS

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As you know the III are members of IFIA - the International Federation of Inventors Associations.

The international community is vibrant and very active when it comes to events and expos with the twin themes of Invention and Innovation.



If you go to <https://www.ifia.com/ifia-event-schedule/#> you will be able to see what events are scheduled for 2020.

HOWEVER, THE WORLD HAS CHANGED!

On the 14th March and according to a warning from government agencies and due to the spread of the Coronavirus, IFIA has temporarily closed their offices, but as their colleagues work online, members can stay in touch with IFIA by email.

IFIA WISHES EVERYONE GOOD HEALTH.

Got something on your mind? Contact us on info@iii.org.za



The latest world Coronavirus statistics (at the time of writing) make lockdown and isolation worth your effort.
Coronavirus Cases: **2,313,897** [view by country](#) Deaths: **159,033**