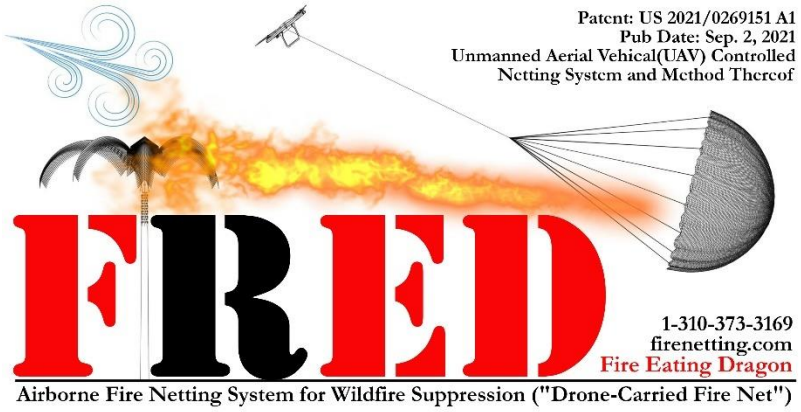
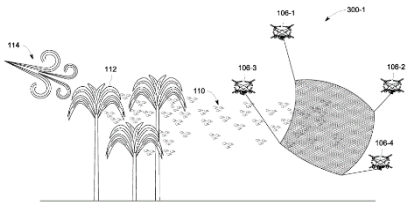




FRED – The Fire Eating Dragon

Patented

Unmanned Aerial Vehicle to Capture Wildfire Embers.

Explain the main problem your startup is trying to solve

The three largest wildfires on record in California caused more than $25 billion in insured damages, a tiny fraction of the total bill for such disasters worldwide. The environmental damage is immeasurable and the wildfire scourge is growing year by year. Much is being done to expand firefighting capabilities, but the biggest challenge has to do with the way wildfires can spread in several directions at the same time. Gusting winds can carry embers for miles, potentially creating new outbreaks wherever they land. If this problem isn't solved, large swaths of dry states like California could potentially become uninhabitable.

The details of the existing issue and specific inconveniences.

Our startup uses giant nets carried by drones to sweep the air surrounding wildfires and trap embers, preventing the eruption of new fires. The nets include sensors that measure the heat, size, location and prevalence of embers. A machine learning algorithm trains on that data and optimizes the program used to guide net-outfitted drones to sweep in patterns and locations that maximize the interception of live embers.

FRED applications need to address the fact that wind driven wildfires expand in area geometrically, but any one FRED deployment covers a constrained area. More UAVs cover more area but adding platforms are a linear solution to a geometric problem. The challenge is how to have platforms pre-deployed in order to catch the fire early. The Electric utility use case: FREDs deployed at the high-tension towers with tie-ins to sensors to detect arcing and possible ignition. We expect housing development point defense where platforms could be pre-deployed based on meteorological data.

Whichever use case you think best, by stepping through what happens and when, you can show that you know exactly what capabilities are necessary for FRED to accomplish its mission and, more importantly, how close FRED is to being realized.

We have a linear solution to a geometric problem.

The details of how your startup is trying to tackle the existing issue/inconveniences

Multiple conversations with Universities with Wildfire programs have been very encouraging and have put a certain determination in FRED's mission. The key existing issue is that the study of wildfire embers is very limited. This creates certain advantages for FRED to be part of the scientific process to find new solutions.

Two important steps are being taken for FRED development. One is direct contact with multiple heavy lift drone companies and the other is off-the-shelf parts configurated into a self-manufactured FRED. We see multiple UAV Configurations Designs to be Built including the Flying Net and Heavy Lift Drone Systems.

University of Florida's WALL OF WIND is both a resource and a model for testing and development. The limitation of the WALL OF WIND are its daily $25,000 use fee and we can't use burning embers for real world wildfire simulations. As FRED is using heavy-lift drone motors we think we can build a wind tunnel inhouse.

For example, this Drone Motor is designed for continuous 10kg lift per motor with burst capability to 30kg. It is priced at $399 each. With a 30" propeller we see building our own wind tunnel that will be solar powered and off-the-grid. With two 40' shipping containers we can use for scale and single tree versions of FRED. Nine (9) Drone motors would fit on one end of container one. A concave structure would funnel the wind to increase velocity and force. The outlet is designed to allow erratic wind patterns. In short, we can build a viable wind tunnel for under $25,000 and have a resource that not only can we use all the time, but we can rent to others.

Sensors and Cameras play a very important role for FRED, so relationships have been developed with global manufacturers of thermal and high-tech lenses, cameras and sensors. FRED has an internally created Oracle based dashboard to receive streams of data, route to specific tables and allow real-time views, charts and graphs.

AI Flight Controls is really about game play to teach automated FRED units to capture embers, avoid getting hit by embers. Brad Bartz has deep team in AI and Internet Technology stemming from founding the first internet company in Japan circa 1990. Microsoft and other players also have open-source drone simulation programs ripe for use and modification by FRED.

Requests for Operational Clearance. The effort to build FRED coincides with getting flight clearance with specific emphasis of working and communicating with other in situ fire fighting assets. This seems to be the hardest hurdle to climb now, but as social media starts to show and tell FRED it is felt that progressive fire fighting teams will welcome FRED.

Show and tell again and again is key to FRED's development and success. Each time FRED is presented to the fire fighting stakeholders there is a good chance of new information and insights.

Potential demo of the product & technology.

We can demo scale versions now. Please see https://firenetting.com for a youtube video showing early test of concept of FRED in action and animation.

Figure 1 Rotor X eVTOL has 1600lbs lift and is slated for FRED testing.

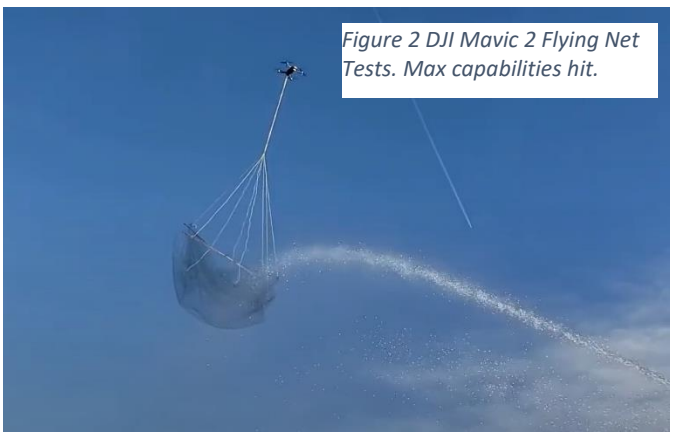
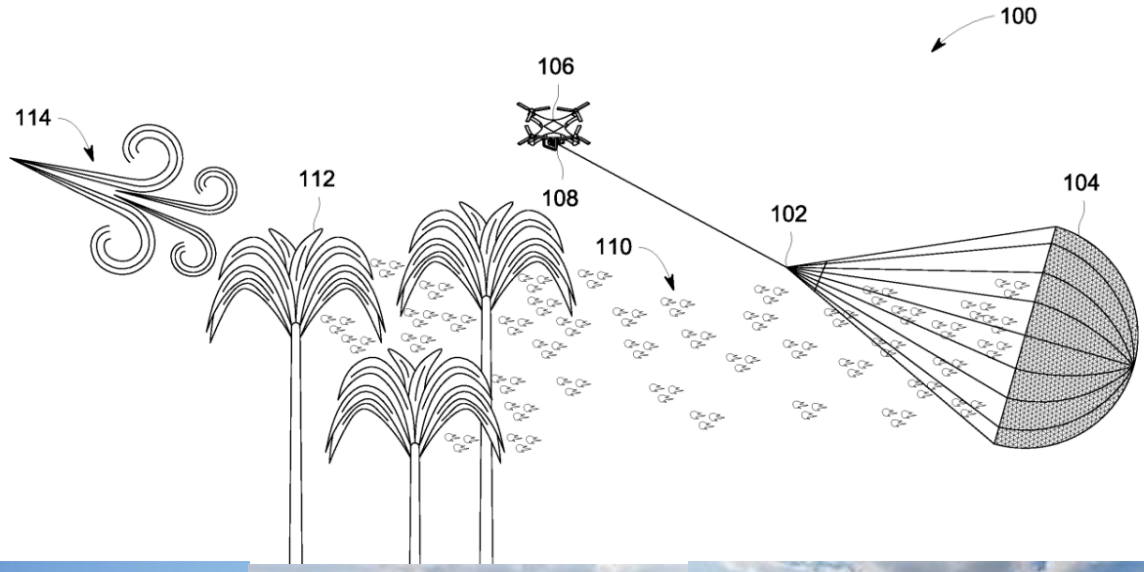


Figure 2 DJI Mavic 2 Flying Net Tests. Max capabilities hit.

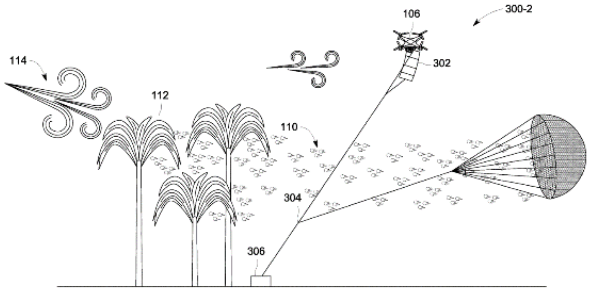
FRED IS READY TO DEPLOY CAPITAL FROM THIS STARTUP WORLD CUP COMPETITION.

Snapshots of demo if real demo is not available



A net is either carried by off-the-shelf drones or the drone technology is built into the net. Or both.

One manufacturer in our development que has a 1600 lbs drone lift capacity. The other several heavy-lift drones vary from 10kg to 100kg in capability. It must be noted that bigger may not be better to navigate the trees for the forest.



This image shows a ballasted system designed to handle extremely high winds and limit failure and losing drones. The world war I inspired French Heavy lift kite is augmented with drone technology for flight control. The kite uses the wind as a lift resource. This model is particularly planned for use on Freeways like the 101 between Simi Valley and Malibu. The Woolsey fire jumped 500 feet of concrete because nothing was attacking the embers.

Explain the potential market size of the product/technology your startup offers

The nationwide cost of fighting wildfires is tens of billions of dollars a year and growing fast. Governments are responding urgently, creating a massive opportunity for methods and technologies that prove superior.

California Governor Gavin Newsome has proposed a $920 million 2023 budget for wildfire response proposals across multiple departments. The US federal wildland fire management budget request for 2023 is $1.5 billion. Separately, the US Forest Service allocates almost $2 billion a year to fighting wildfires. We target a fraction of this spending at an estimated $2.5 billion a year for designing and deploying drone netting systems.

Explain the product tractions such as:

Number of downloads	0
Number of active unique visitors	0
Number of valid partnerships	0
Amount of revenue	0
Number of customer, etc.	0

Our market is 80% government-funded firefighting organizations and 20% individuals with high exposure to financial loss from wildfires. Marketing focuses exclusively on getting government buy-in, as that insures sales to private individuals.

Explain about your team

We developed this proposal with input from a range of artificial intelligence, drone design and information technology professionals who have other day jobs, but love the mission and the idea. Once seed funding is in place, we'll be hiring some of them.

Number of team members

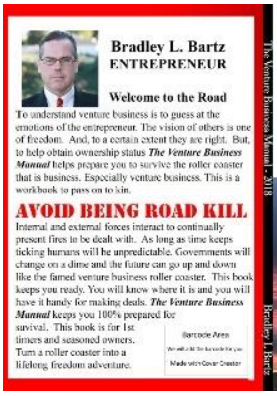
1 (pre winning this contest)

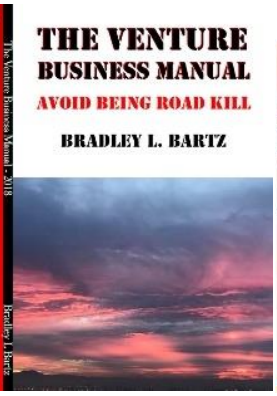
Qualifications, experience, and education of the team members

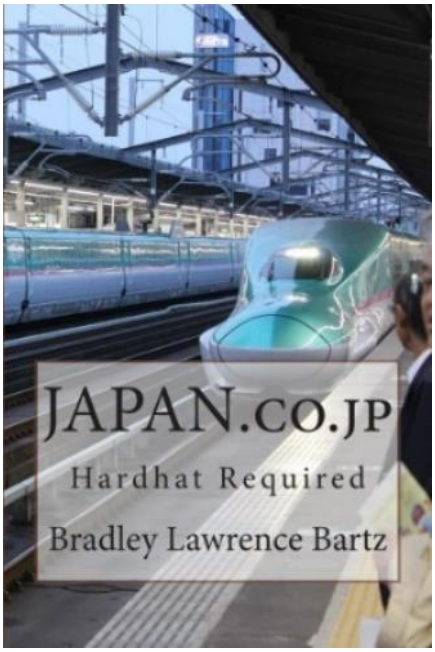
Bradley Bartz is the founder and director. He has built and operated companies including an internet service provider, website design and development company and publishing enterprises over the past 40 years. He also founded, owns and operates one of Southern California's oldest and largest solar energy developers and holds a bachelor's degree in business administration from Loyola Marymount University.

Three books are really important to learn about Bradley Bartz and all can be read at www.Japan.co.jp:

1. The Venture Business Manual: Avoid Being Road Kill
2. Japan.co.jp: Hardhat Required
3. Solar Bible 15th Edition







https://twitter.com/abcsolarinc

Our twitter feed will grow with more information and details about FRED.

Direct and indirect competition

We are not aware of any direct competitors. Indirect competition abounds as conventional firefighting operations gather aggressively around the massive government funding flowing into firefighting. This is a much-needed expansion, but it is also essential to aggressively support diversified approaches to fighting wildfires. Conventional methods and providers have established powerful lobbying and funding mechanisms that, in many cases, sidestep innovation. We're helping as much as we can to put an end to that.

Explain how your startup can compete and win against the competition

Deployment is a key benefit of using drones vs conventional aircraft and land-based vehicles. Drones don't need special takeoff or landing spaces and are not constrained by topography. They don't take up huge space to store and go "as the crow flies" to the fire. This dramatically speeds fire interdiction. True, the earlier you get to a fire, the better, but it doesn't seem like a challenge to deploy these in a way that dramatically improves on what's currently available. Rather than focusing on deploying drone nets as close to fire zones as possible, it might be better to focus on delivery using unmanned aircraft. Have one main hub in each fire region. When a fire is reported, a net drone swarm is delivered via winged UAV to the site for deployment. This would reduce the need for keeping hundreds of swarms stored across the entire landscape.

FRED Leapfrogs Existing Fire Fighting Technology.

Patent Granted: US 2021/0269151 A1 - Pub Date: Sep. 2, 2021
https://firenetting.com/US20210269151A1_Unmanned_aerial_Vehicle_UAV_Controlled_Netting_System_and_Method_Thereof_Patent_Granted_September_2_2021.pdf

Differentiation from the competition

In the air its Perimeter Solutions that holds a near monopoly on fire retardant dropped from the skies. On the ground its traditional fire fighting units that for some reason is considered competition to FRED. We see both as resources, not competitors. 1) Multiple FREDs can be dropped from the sky with the same planes / helicopters used to drop water and fire retardant. 2) With remote control of FREDs the local fire fighting agency can carry and launch at prescribed locations.

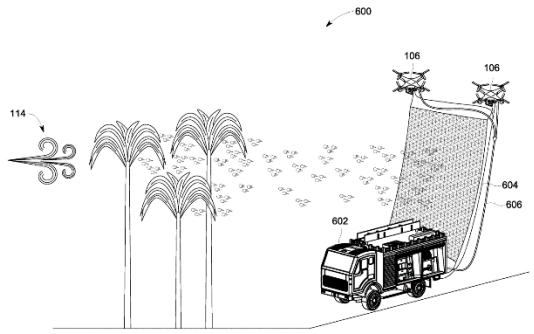


FIG. 6

Explain your startups' business model

SDA – Sales, **D**elivery & **A**dministration are the foundation of our business operations. Bartz coined and explains SDA in his book The Venture Business Manual: Avoid Being Road Kill. The key basis is understanding your delivery capabilities and translating that to sales offers that can be delivered. Administration envelopes Sales and Delivery with much needed resource planning and tabulations. Administration has a continued focus on compliance.

For FRED we see these highlights to our SDA path.

SALES:

Operational Lease Service -- with full remote pilot services.
Licensing
Product Sales – our netting system attaches to existing "Postal Drones". (Heavy Lift Drones).
Product Sales – Home / City Use

DELIVERY:

As an explosion proof drone motor / component design is to be manufactured by US based industrial sensor/camera leader. In the early versions of FRED off-the-shelf drone motors and components availability determines number of units than can actually be delivered. As inhouse manufacturing of certain parts is planned, we will have a direct correlation to what can be sold.

ADMINISTRATION:

Compliance is a key success factor to FRED's success. In order to access certain government grants and R&D funds all Federal and State certifications must be identified and maintained. This includes SAM and other government tools.

Explain how your startup is going to generate revenue

FEDERAL FRED - $1 per ember captured is an easy way to explain potential government billing. As training the automated pilot is gaming focused our systems count the number of embers captured to allow the Artificial Intelligence to devise flight path. Focus is on gameplay translating to methods.

FASHION FRED – target is high end homeowners that want every edge available to save their property from fire damage. The revenue is twofold:

A. FRED lease / sales – COGS + 60%.
B. FRED Remote Operations and Sensor Packages

FREELOADING FRED Grants for Research & Development

University Cooperation in Government Funded Science
Direct operational grants from private sector
Startup World Cup

FIREMAN FRED – target with proven tech is to gain traction and adoption of local fire agencies in wildfire areas.

A. FRED lease / sales – COGS + 60%.
B. FRED Remote Operations and Sensor Packages

FARM FRED – target is using net to capture bug swarms around farms. E.g. Locust.

FEARLESS FRED – Xbox / PlayStation games. Using augmented reality and google earth overlays to give gamer their home in a wildfire situation. The process of gaming teaches FRED each and every inch of a gamer's home. Key data sets include wind and weather patterns to simulate real world "worst day" scenarios.

Explain different product and membership packages available

This is a marketing question that can only be answered in real world situations of a marketing team scratching for the magic message. Membership packages by default offer potential clients a choice to participate. It is a salesman closing tool, nothing more. Once we find the "right" message you will know because it will be plastered everywhere.

Figure 3 Woolsey Fire Reaches Pepperdine Campus: 200,000 Evacuated

Long and short term plans of your startup

Does anyone at Pepperdine remember the Woolsey Fire? Is there any reason to think that when prompted by FRED that Pepperdine might make capturing the wildfire embers at the campus a mission?

In the short term the focus is on one tree at a time with either a drone carried or a built-in Firenetting Drone. Multiple UAV Configurations will be built and tested.

University of Florida's WALL OF WIND is $25,000 a day in practical terms. For our purposes we can convert two shipping containers into Drone Motor Solar Powered Wind Tunnel that we can actually put wildfire embers in the wind stream to attack FRED. Simply put a Wall of Drone Motor Propellers feeding to

a concave outlet that amplifies the combined wind to make a wind tunnel for our continued use. Again, this can be designed, built and housed at Pepperdine to help FRED and then have a wind tunnel asset for all sorts of student uses.

Sensors and Cameras – the partners not mentioned here are world's leading manufacturer of cameras, lenses, sensors, and security control systems.

AI Flight Controls and High Wind Augmented Reality Drone Simulation Gaming Systems for Xbox and PlayStation. The exceptionally high-end FRED operating system used to operate and train is perfect for gaming.

Show and tell again and again. Safely.

Requests for Operational Clearance.

Explain the funding status of your startup

Self

Investor's names if available

Self

Previous round details

None

Future round plans

Many

VOTE FOR FRED. SAVE THE PLANET!

Figure 4 Embers to be captured. Can you see them?

Figure 5 NASA Predicts Where FRED Deploys

Figure 6 Woolsey Fire threatens Pepperdine as students seek shelter on campus - ABC7 Los Angeles