What just happened?

A storm was coming, and not many of us were very much aware of what was about to come and hit the world with. Covid19 arrived!

It strangled and stranded all of us in our homes, with a huge impact at multiple levels, from economic, to human and psychological.

It was declared a pandemic on March 11 by the World Health Organization.

To combat Covid19, tech companies like Digifort took a hard look at the new reality and worked hard to build enhanced tools to help make the situation safer and smarter.

Digifort IPXAnalytics is a software that uses Artificial Intelligence to learn and detect events in surveillance cameras.

Artificial intelligence is based on artificial neural networks, which are algorithms that try to mimic the behaviour of the human brain. Operationally we can consider a neural network as a "processing box" that can be trained so that from one input dataset it can generate one or more outputs. It is then possible to "teach" and "train" the application to recognize a specific object in various images. Or you can ask it to count how many times the object appears.

Compared to video analysis software on the market today, IPXAnalytics can reduce the amount of "false positive" alarms considerably. Today the platform can detect over 80 objects such as: person, boat, car, motorcycle, truck, plane, cellphone, notebook, television, suspect, weapon, long gun, motorcycle helmet, (person) with a helmet or without safety helmet - PPE, etc.

Digifort IPXAnalytics response to COVID-19 Pandemic and its applications
Occupancy Management
Retailers are limiting the number of shoppers to promote social distancing. Our new Occupancy Management solution will enable you to operate within the guidelines for occupancy density. With crossing line, you can trigger an alarm when some object is crossing the line and keep counting of the events.
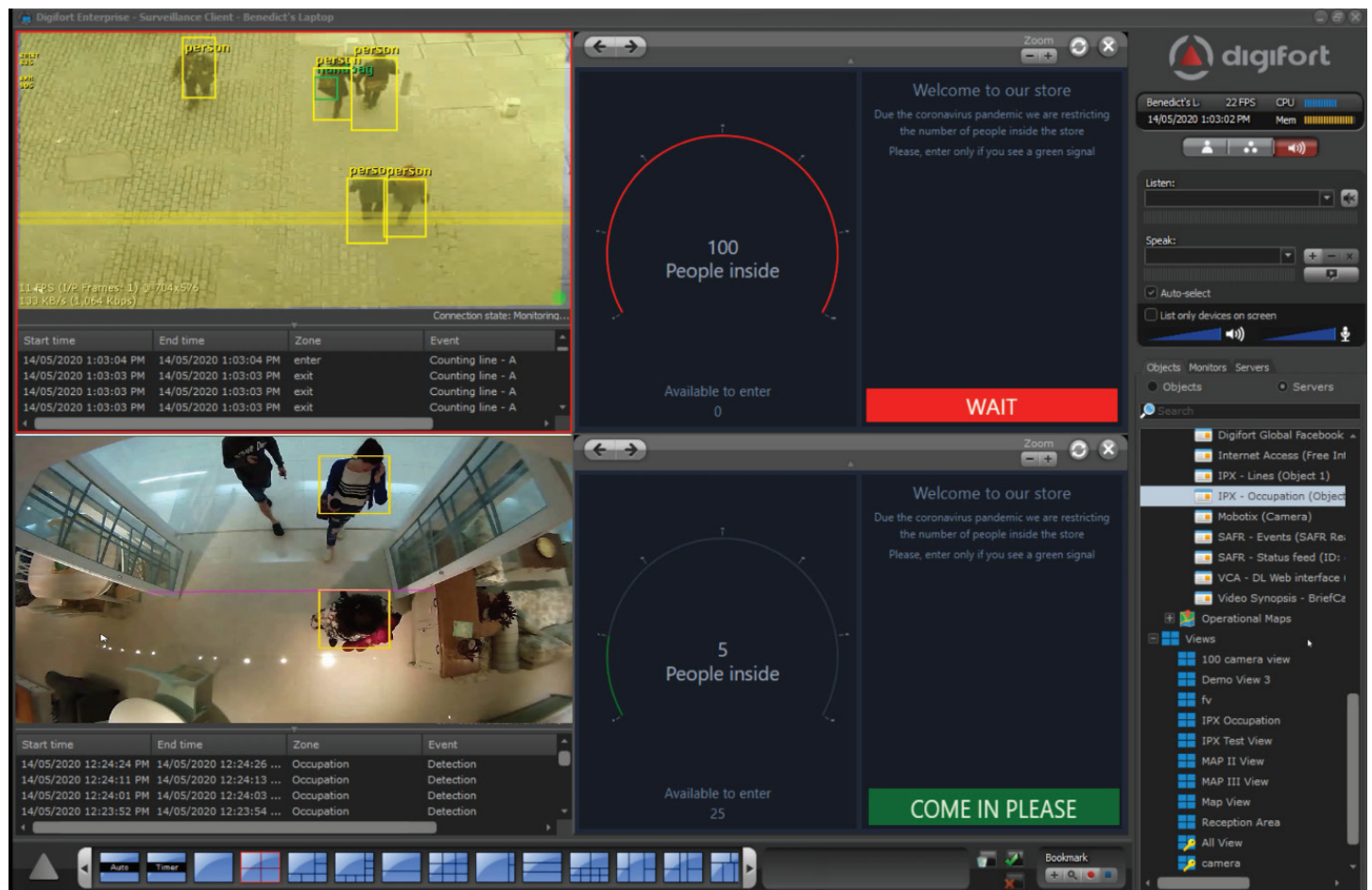
digifort

IPX ANALYTICS

The Artificial Intelligence revolution has begun

As governments ease restrictions to move businesses back into trading, there are questions about how we can continue to keep our workplaces and communities safe

Digifort has developed AI-powered

'Video Analytics Solutions'

for social distancing, mask detection, capturing evidential footages and integration that will allow centralized operation with thermal cameras that are being used for detecting fever. Facial recognition for contact tracing for that critical response incases of the identification of an infected person.

Object Detection Analytics

Based on the deep learning algorithm, we can monitor whether social-distancing protocols have been breached and any individuals who are not wearing a face mask.
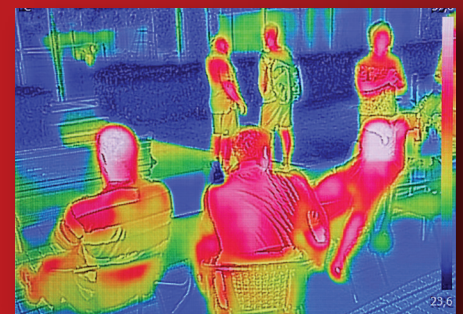
Occupancy Management

The solution employs computer vision technology and includes an algorithm which calculates current store occupancy. Help manage occupancy by reacting to threshold alerts. Alerts can be delivered by global events, to phones via emails or to a third party web-service and trigger a message display on a monitor.

Integration with Thermal Cameras

Thermal cameras, coupled with a black body device as a reference point for determining base temperature, can be used with Digifort to provide enterprising alert actions including automatic bookmarking with evidence protection.

Reports

Generate reports of compliance, operate within the guidelines for occupancy density. Information and insights on how to improve shoppers safety and business performance.

Main Queue
Current Wait time:
24 Minutes
Line length: 10

In last 10 Hours:
Passage count: 69
Min wait time: **0 Minutes**
Avg wait time: **51 Minutes**
Max wait time: **1.7 Hours**

SAFR
17:14:46
January 31

1.6 Hours   Wait time in last 10 Hours

16   Line length in last 10 Hours

11   Passage count in last 10 Hours

Contact tracing to investigate potential exposure to contagion or contaminants

Using face recognition technology, we can determine the contact and proximity history of individual employees or a person.

We can combine all activities by the person and generate reports for all activities related to each person for a given date. Then pull a report to determine who might have come into contact with contagions or contagious persons.

Controlling access to PPE equipment (Personal Protective Equipment)

The use of PPE (Personal Protective Equipment) is fundamental in the fight for the prevention and protection of workers. Therefore, ensuring that the protective mask is in use is of paramount importance. In this way, Digifort IPXAnalytics software is able to identify whether the worker is wearing the mask or not, regardless of the colour.

For access control points, SAFR can detect and recognize faces even with masks on. High level of accuracy has been achieved in detecting faces with masks, so the doctors and nurses don't have to remove the mask to be identified, further increasing the risk of contracting the virus.

Remote Patient's care

Keeping our frontline workers safe and healthy is critical right now. They are at most risk so minimizing close contact with a patient is very
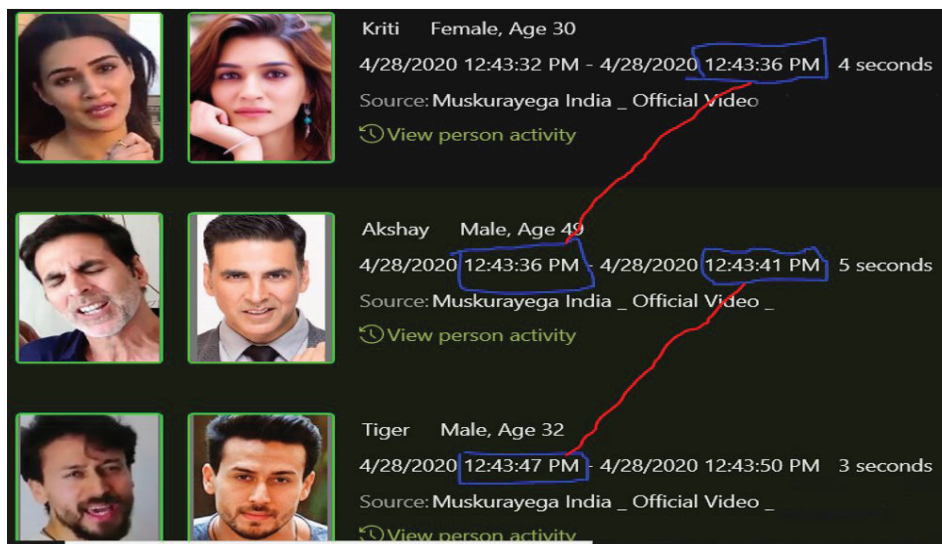
important. Patient rooms can be fitted with SIP intercom-enabled Intercoms that can allow doctors and nurses to monitor and communicate with patients remotely. There are other benefits such as help save time, decrease their risk of infection through close contacts, and ensures hospitals save PPE for those who need them as we face shortages in some areas.

Managing vehicle restrictions with ANPR

During the COVID-19 crisis, some countries are restricting vehicle traffic by only allowing medical staff and government official's vehicles or sometimes vehicles with a license plate ending in specific numbers to be on the road on specific days.

Digifort LPR can ensure that only medical staff or government authorities are on the roadways during a curfew.

Integration with thermal cameras

One of the main symptoms of COVID-19 is high fever. For this reason, many businesses are now considering thermal camera technology to try and detect people showing signs of fever.

Through our native integration with these cameras, they can work within the central platform, Digifort Surveillance Client, and extend its capabilities much further.

Digifort IPAnalytics Other Applications
Control in hazardous areas:

Areas or places that require an exclusive surveillance post due to the hazardous operation or level of access control can use IPXAnalytics software.

One of the applications would be, for example, a hazardous area where people are prohibited from walking in a while there is trucks. You can configure the system to trigger an alarm when detecting any presence of person immediately, as pictured below.

Another example would be a ban on the use of mobile devices in specific areas. In this example, we can combine object identification conditions such as "person" + "mobile".

The system recognizes the "person" object, but if it does not identify the "cellphone" object as well, the alert is not triggered. The moment the system recognizes both objects, an alarm is triggered immediately.
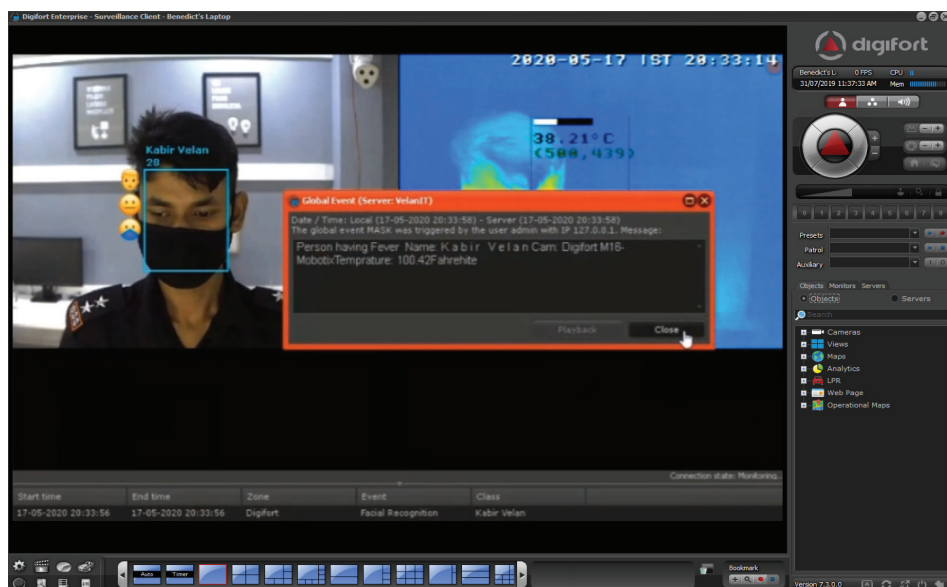
Perimeter Control:

Similar to our last example of hazardous areas, Digifort IPXAnalytics software can be used for perimeter intrusion alarms. This allows you to configure the alert only for the objects that you need.

As an example, we can determine that in a certain fence, there can be no presence of animals. Therefore, if a person approaches, the alarm will not be triggered, but if any animal approaches it will trigger an alert.

Suspicious and/or flagrant behaviour alarm

Digifort IPXAnalytics software is designed to address situations where there are suspicious and blatant behaviours such as a person entering a pharmacy, bank, supermarket without removing the motorcycle helmet or carrying a weapon. In such situations, it is possible to configure an alert when the software recognizes the "helmet" or "person with weapon" object, among others.

Object Counting

Using Digifort IPXAnalytics software, you can determine the minimum or a maximum number of objects allowed in a given area.

For example, in picture below, we have a parking lot. Through the system, we can program an alarm that warns when the car spaces are all filled. Thus, the operator, upon receiving the notice, may take appropriate action.

Another application would be for controlling queues or areas. The maximum number of people per row (or area) and the maximum waiting time can be determined. Thus, when the amount and time are exceeded, an alarm is triggered by the operator. See picture below.

Object Orientation-Slip and fall detection: With object Orientation filter, you can trigger alarms only if your target object is in a horizontal position like the yellow object in the picture 4 below:

IPXAnalytics has three types of modules:

General Module
Identifies over 80 object types. Person, Bicycle, Car, Bike, Airplane, Bus, Train, Truck, Boat, Semaphore, Fire hydrant, Traffic sign, Parking meter, Bank, Bird, Cat, Dog, Horse, Sheep, Cow, Elephant, Bear, Zebra, Giraffe, Backpack, Umbrella, Purse, Tie, Suitcase, Frisbee, Skis, Snowboard, Sportsball, Kite, Baseball bat, Baseball glove, Skateboard, Plank, Tennis racket, Bottle, Wineglass, Cup, Fork, Knife, Bowl, Banana, Apple, Sandwich, Orange, Broccoli, Carrot, Hotdogs, Pizza, Donut, Cake, Chair, Sofa, Plant, Bed, Dining table, Bathroom, tv/monitor, Laptop, Mouse, Remote, Keyboard, Cellular, Microwave, Oven, Toaster, Sink, Refrigerator, Book, Watch, Vase, Scissors, Teddy bear, Hairdryer, Brush

Crime Module

Identifies short and long weapons (firearm), suspicious positioning (aiming position), motorcycle helmet and mask.

PPE Module

Identifies if the person is wearing a hard helmet, safety vest, masks, gloves and goggles.

Visit our website:
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