From the Chair

In our last newsletter, the pandemic was just hitting our state and things were somewhat chaotic. All of our transit system’s in Florida reacted quickly and were able to help suppress the spread of COVID-19 in all of our 67 counties. I commend each of you, and your employees, for the swift actions that you took. I realize we’re not through this epidemic quite yet, but, we all know now that we are much better prepared to react to it.

I think it’s important to take some time to thank the Federal Transit Association (FTA), the Florida Department of Transportation (FDOT), and the Center for Urban Transportation (CUTR) for their amazing support during this difficult time. All of these agencies have gone above and beyond for our industry and the information-sharing, best practices, technical assistance, and financial support have been a lifeline for our agencies and staff.

We are all now dealing with a lack of ridership and skepticism about using public transportation. In the early days of the pandemic, many public officials urged people to avoid crowds, enclosed spaces, and time spent in close contact with others – each a significant feature of every transit system across the nation. But, even during a pandemic, public transit systems have shown themselves to be indispensable to the functioning of any city by transporting essential workers to jobs, while also acting as a major economic engine.

As our cities take steps to reopen, our main focus will be to manage the fear of (continued on page 2)
From the Chair (cont. from page 1)
the riding public. It’s recommended that high visibility cleaning and strong messaging campaigns, coupled with universal mask wearing, can help reassure passengers that they can safely return to riding. Even more encouraging is the lack of evidence that public transit systems played a role in COVID-19 transmission — and a growing body of research is pointing in the other direction. Several European studies have shown that transmission on public transit has been low to even nonexistent. A June 2020 study conducted in Paris, France found that none of 150 identified coronavirus infection clusters from early May to early June originated on the city’s transit systems. A similar study in Austria found that not one of the 355 case clusters in April and May was traceable to riding transit1.

It’s difficult for us, as transit leaders, to accept certain guidance that actively encourages people to avoid riding public transit, because we know that it fails to recognize the realities of millions of Americans for whom owning and maintaining a car is simply unaffordable. A high percentage of these Americans are essential workers that continue to rely on public transportation day after day1.

As we all do our best to promote the safety, efficiency, and economic importance of using transit, it’s the perfect time to think about your system in totality and get creative about the services we provide. With time, I have faith our ridership will come back because public transportation is deeply rooted in our history, and will continue to shape our future.

Again, thank you for the inspiring support and creativity during this past year.

Sincerely,

Murriah Dekle

1Fear of Public Transit Got Ahead of the Evidence, The Atlantic, June 2020
Investing in the Future of Transit Security with Mobile Video Surveillance

by Kirk Goins, CEO, Luminator Technology Group

As mass transit systems continue to be a target for crime and terrorism, it’s important to stay up to date on trends and technologies that can help keep transit security teams connected in the event of incidents. When it comes to improving on-board security, staying current means installing video surveillance systems that are wirelessly connected, designed to withstand the rigors of the mobile environment and optimized for communications in a sometimes-connected environment. The Florida Public Transportation Association and other transit associations nationwide are looking for these solutions for their member agencies to monitor activity and incidents in and around vehicles, access video recordings across an expansive fleet, and provide strong wireless networks enabled with high-speed downloads and live look-in for command and control situations.

Transit professionals seek fast, reliable connections for multiple installed on-board security technologies. Within this connected network, transit teams can leverage new, advanced technologies (such as 4K and high definition video and 5G networks) to pinpoint exact incident locations and enable rapid response directly from agency headquarters. On-board video security solutions with a less-than-reliable network sap valuable time and manpower from maintenance operators on the ground and the employees back at central command. When the network can’t keep up with the power of the on-board video security hardware and live streaming capabilities, these teams must battle lag, which can be detrimental in high-intensity situations.

Resources dedicated to managing an unreliable network waste time and increase risk for both physical and cyber-attacks. Implementing a state-of-the-art on-board video security solution that relays information about incidents across a citywide wireless network is key to the efficiency of transit authority management teams. By leveraging an efficient solution optimized specifically for on-board applications, transit agencies can connect and transfer valuable recordings at fast speeds and enable high-quality live video streaming. A single-sourced, cloud-based management software application also allows for better control and retention of data, including accessing bandwidth, updating information and managing priority data flows, such as live video during an emergency. The efficiency and effectiveness of a transit operations management team depends on the interconnectivity and scalability of its on-board vehicle security technology. By utilizing an all-inclusive video solution, state transit associations like FPTA can assist their member agencies to organize recordings and incident reports across all vehicles via a single source and scale technologies as upgrades become available. When the solutions are fully interoperable with existing technologies, agencies can ensure initiation of remote firmware updates as governments, law enforcement, banking, retail and other industries across the nation prepare for the transition to 5G. By staying up to date on current technology trends, agencies can increase safety, improve efficiency and save money while positioning themselves for success in the future.
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ENGIE Solutions Offers Bus Real-Time Occupancy Info During COVID-19

For several years, ENGIE Solutions has innovated to offer smarter, greener and safer mobility. Faced with the health crisis we are going through, being able to move around safely has become a real challenge that cannot be met without guarantees of quality and safety. To contribute to the collective effort, ENGIE Solutions is committed to participate in reviving lifestyle habits in the best conditions.

After a period of unprecedented confinement, ensuring the safety of workers - no longer able to work remotely - in public transport is at the heart of concerns. At a time of progressive deconfinement, social distancing has become the norm in the public space and tends to become so in public transport.

To meet this new requirement, ENGIE Solutions is supporting Public Transit agencies in managing social distancing within their vehicles, and offering its Automatic Passenger Counting (APC) as a way for public transit operations to monitor the ridership in their bus or train fleet, in real-time.

Like never, agencies need accurate and real-time ridership data to dynamically plan and adapt their everyday services. Using passenger counting data coming out of bus or train fleet, agencies can analyze current ridership and trend per route, stop, or time of day, and optimize vehicle utilization and schedule to the current reality.

The APC data will support critical decisions on fixed routes changes such as which route shall be eliminated first, or which routes are irreplaceable. The APC module provides critical information and notifications about the current number of passengers in your vehicles in real-time, which is critical to make social distancing respected.

New products to help fight the spread of germs on public and commercial transportation. Freedman Seating, with essential manufacturing in Chicago, IL and Rochester, IN, announced a new line of safety products intended to help curb the spread of germs on public and commercial transportation vehicles.

“There is nothing more important to us than to protect the safety and well-being of our employees, business partners and America’s Transportation infrastructure. Every decision we make and action we take keeps those principles in mind.” said Dan Cohen, President of Freedman Seating. “Our team is proud to develop and manufacture PPE to help keep America moving, responding and delivering hope.”

Freedman’s Passenger Protective Equipment, or PPE, includes three products to start:

**Passenger Guards** – Made from a clear, soft yet durable vinyl that is easy to replace, easy to clean, and UV and Mildew resistant. It is mounted at the top of a passenger seat, behind the passenger’s head, providing protection from sneezes, coughs, droplets and other airborne person-to-person threats and germs. These guards can be easily added in the field to 3PT mid-high, Feather Weight mid-high, GO-ES and most Freedman Foldaway seats.

**Grab Rail Covers** – Easy to clean, replace or add in the field, these covers are made from CMI Dimensions Nanocide vinyl with embedded silver, a natural antimicrobial. *Learn more.

**Social Distance Seat Bands** – Communicate social distancing restrictions with a durable seat band, wrapped around any seat designated “Do Not Sit.” Adding PPE to a bus is a significant step forward in improving safety and trust within public transportation at a time when attracting and retaining ridership is extremely tough,” said Cohen.

This new line of PPE products represents another major benchmark in Freedman’s 125-year history as an innovator of seating and safety solutions to the commercial market.

*Freedman Seating Co. Passenger Guard assemblies are manufactured with materials and tolerances that are crafted to safely and reliably pair with Freedman Seating brand passenger seat products. Freedman Seating recommends against combining other manufacturers’ accessories with genuine Freedman Seating Co. products – and expressly disclaims any liability for damages or injury arising out of any such unauthorized combinations.*

The occupancy rate of a bus or train can be displayed for the dispatchers. Having this information will allow them to quickly react if vehicles are getting close to the occupancy rate set-up.

In addition, real-time occupancy status is made available to your riders on your mobile app via the real-time standard GTFS-RT. Passengers will be able to visualize the occupancy level of their next bus, in real-time. This will allow them to respect social distancing. Thanks to its offer and new feature, ENGIE Solutions allows passengers to avoid crowds, travel in a safe environment and regain confidence into public transportation.
Human trafficking – or modern day slavery – is a global problem in which people are illegally bought and sold for forced labor or commercial sex. This heinous crime happens in urban and rural communities throughout the United States, including in the state of Florida. The National Human Trafficking Hotline reports that since 2007 they have received over 14,900 reports of human trafficking in Florida, generating over 4,600 cases involving over 5,800 victims. Given that human trafficking is a chronically under-reported crime, the actual number of victims in Florida is likely far higher.

Transit employees – including bus drivers, maintenance staff, ticket counter personnel, janitorial staff, security guards, etc. – in Florida have an important part to play in combating this crime, particularly because they may be coming into contact with human trafficking in the course of their everyday jobs. Traffickers recruit victims at bus stops or out of transit centers and utilize transit in transporting them, either following an initial online recruitment – when they are using a bus or train to bring their victims to them – or using transit to take their victims to and from places where they will be sold. When victims are able to get out, a transit center or bus station may be the first place they’ll go to find safety or escape. In one study, 42 percent of survivors of trafficking in the United States stated that buses were used in the facilitation of their exploitation, while 26 percent reported that public or mass transportation played a role in at least one of their exit attempts.

Transit agencies in Florida can prepare for possible encounters with human trafficking by training their staff, establishing internal reporting policies, connecting with their local anti-human trafficking task force, and allocating some of their advertising space to victim-centered awareness campaigns. All of these actions can be integrated into a transit agency’s regular operations to ensure that their engagement is sustainable and coordinated. For step-by-step guidance on launching an anti-human trafficking initiative, download the free resource “Transit on the Lookout to Combat Human Trafficking: A Toolkit for Public Transit Agencies.”

To access free industry-specific anti-trafficking resources, including a 30 minute training video, transit agencies can partner with Busing on the Lookout, a program of the nonprofit organization Truckers Against Trafficking. For more information, contact Annie Sovcik, director of Busing on the Lookout, at asovcik@truckersagainsttrafficking.org or visit http://truckersagainsttrafficking.org/bus-training/.
Josh Helm has joined Proterra as the Regional Sales Director of the Southeast U.S. Josh brings over 12 years of sales experience to Proterra and has been in the transportation industry for 8 years. Most recently, Josh was a Regional Sales Manager at American Seating, and prior to that he sold fleet management solutions as a sales executive at Fortress Mobile. Previously, Josh played professional basketball in Europe and was inducted into the Athletic Hall of Fame at Mercyhurst University, where he earned a bachelor’s degree in Business Management.

The purpose-built design of the Catalyst vehicle enables the best placement of battery packs, creating a lower center of gravity for the greatest stability. Designed from the cell level up for heavy-duty transit usage, Proterra® batteries have a ruggedized, commercial-grade housing to withstand harsh environments. Sensors throughout each pack enable continuous monitoring for faster diagnostics and service, while active thermal management software ensures optimal operation in any climate. Built in Proterra’s Silicon Valley battery manufacturing facility by the best minds in battery engineering, Proterra battery systems are designed to be compact, safe and powerful.

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New Electric Vehicle Maintenance Skills for Maintenance Technicians

by ViriCiti

Transitioning a bus fleet from diesel to electric can be an overwhelming task in many ways. It can be nerve-racking working with vehicles’ high voltage components, and many new parts. A knowledgeable and confident maintenance technician team is crucial. Therefore when transitioning to electric buses, it’s essential to bring the team up to speed with the new aspects, technical issues, and differences between electric buses and diesel buses.

Take a look below at some of the critical areas to understand as a maintenance technician for electric buses.

**Electrical schematics** – To begin with, the schematics are a map of all the wires on the vehicle. Diesel buses have schematics too. However, the electric bus schematics are usually much larger. They also involve many more parts than that of a diesel bus. As an electric bus maintenance technician, it is important to have a basic understanding of how to read an electrical schematic.

*Recommendation:* Take a basic class about how to read an electrical schematic.

**Multimeter use and how to safely check a component** – A Multimeter tool is a handheld device used to measure electric current, voltage, and resistance across a range of values. These tools are used to measure electrical continuity and voltage drops across a fuse, circuit breaker, or component. For that reason, the multimeter will help in deciding whether or not an item needs to be replaced. Most importantly, it is used to check there is no energy present before you touch or replace any electrical high or low voltage component.

*Recommendation:* Become familiar with this tool to keep you safe while performing a maintenance check on the electric bus. It will confirm there is no energy when checking a component on an electric vehicle. Above all, it shortens the amount of time spent troubleshooting. Here is an excellent article to teach you how to use a multimeter.

**Learn the basic components of an electric vehicle** – It is vital to have an understanding of the basic components of an electric vehicle, including the charging components. Some of the main components that are new and different, thus important to understand include:

- Electric bus battery to understand the components of an electric vehicle
- Power train parts, including the traction motor and transmission
- The battery packs and battery monitoring system (BMS)
- Charging ports and/or overhead charging interfaces
- The air system, brake system, and doors are generally all the same. Sometimes they vary slightly between electric and diesel models.

*Recommendation:* Learn the main basic components of an electric bus, especially those related to the power train, batteries, and charging. Check out the resources at the bottom of this article to get you started!

**Common EV maintenance issues, and things that are the same** – The main difference between EV maintenance and diesel maintenance is that EV maintenance involves more visual inspections and checks. Compared to diesel maintenance that includes parts and fluid replacement. One of the most common maintenance activities for electric buses is battery checks. These checks are generally not invasive or time-consuming. Additionally, they are sometimes automated with diagnostic messages. Typically these checks happen at regular preventive maintenance intervals. They look at the humidity levels or past temperature information to see if there were any recent issues.

Another key activity is to look at critical high voltage connections. This check makes sure these connections are not damaged or corroded after use. It also ensures energy flows with no issues.

*Recommendation:* compare a familiar diesel preventive maintenance schedule with an electric bus schedule. This helps in understanding the different activities and tools involved. Pay extra attention to any checks required for the battery packs.

**Useful electric bus maintenance tips**

- **Bonus Resources!**

Here are a few other sites to learn more about electric vehicle maintenance. Take a look to find training programs for a new electric vehicle maintenance team:

https://www.cleantechinstitute.org/Training/CEVT.html

The Clean Tech Institute is a leading research, consulting, and training organization in the clean & renewable energy industry.

https://www.euenergycentre.org/training/electric-vehicles-course/

The European Energy Centre is an Independent Educational Body for the Renewable Energy and Energy Efficiency Sectors.
On-Demand Booking Helps Lethbridge Transit Navigate COVID-19

There are not many companies around the world who have been immune to the effects of the COVID-19 pandemic. Among them, Lethbridge Transit has had to adjust their operations because of an unexpected decline in ridership and social distancing mandates, as a direct result of the pandemic. After careful consideration, Jeff Gillette, GIS/Applications Specialist for Lethbridge Transit and his team chose to change their service model. Throughout this article, Jeff discusses how Lethbridge Transit switched their fixed route service to an on-demand service, in hopes of ensuring their riders were safe while making essential trips. Here is what transpired.

At the beginning of 2020, Lethbridge Transit had an average of 11,000 riders per day. Operations were running normally, until the onset of COVID-19.

Because ridership instantly dropped by 90%, they had to switch to their holiday schedule. Although this meant operating within the same hours, they had fewer buses on the road. Unfortunately, this strategy was not sustainable. By mid-March, they began offering free rides by using back-door boarding, in an effort to reduce contact with bus operators and enhance accessibility. Lethbridge Transit then faced another dilemma as citizens began taking the bus to escape the cold weather, or just because they were bored. Those travelling for essential needs and services (groceries, doctor appointments), were rightfully worried with the lack of social distancing. In order to make public transportation safe and feasible for people travelling for essential needs and services, Lethbridge Transit decided to pivot to micro transit-like service with their full-sized fix route buses.

The implementation process

Luckily, implementation was easy since they managed to import all their fixed route stops as pickup or drop-off locations into their existing demand-response software, and it took only 30 minutes, with TripSpark’s help. However, if they had to manually enter the data, Jeff projected it could have taken them up to a week. Lethbridge Transit’s main goal was to ensure safe and reliable service, for those who needed it.

They were able to manage their ridership by setting passenger occupancy parameters in their demand-response software, to make sure they never surpassed the limit. “We just needed to make sure that were providing a service for those who needed it, providing it safely and being able to space people out, and making it reliable. Transit before the pandemic was a lot different, we used to just pack people on the bus.” – Jeff Gillette

A look at Lethbridge Transit, post-implementation

In the beginning, things were pretty hectic at their call center with incoming calls from riders booking their rides. They used an online form which helped reduce the number of inbound calls. Eventually, the call volume will further decrease once they implement another instance of TripSpark’s online booking system – Passenger Portal (which they have been using for their paratransit service for years). Until then, to book their routine and/or one-time essential trip(s) between existing bus stops, riders simply fill out the form and Lethbridge Transit staff manages the rest. Those who need to travel regularly (e.g. travelling to work, Monday – Friday) can subscribe for their rides, rather than booking each one individually. Not only does this minimize work for Lethbridge Transit staff, it saves the riders time. The implementation of Rides by Reservation (with their existing demand-response software) has enabled Lethbridge Transit to encourage social distancing because they can ensure a bus does not exceed 14 passengers. Since riders are now on one bus for the entirety of their trip, they are safer and many of them enjoy shorter travel times than before, when they made the same journey with fixed route service.

Operations have been running efficiently under the new service model. The main win was control of ridership – we knew who was getting in, we can control the number of people on the bus and if needed we added more buses.” – Jeff Gillette.

Advertising Rates and Information

Our next newsletter will be out in December 2020. The newsletter is printed in full color, and past copies may be seen on our website at https://floridatransit.org/publications.

To ensure inclusion we must have final copy no later than December 4th.

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