



Finance and Administration Services Department

PURCHASING DIVISION

115 S. Andrews Avenue, Room 212, Fort Lauderdale, Florida 33301 | 954-357-6066 | FAX 954-357-8535 | broward.org/Purchasing
Hours of Operation: Monday through Friday 8:30 a.m. to 5:00 p.m.

PURCHASING AGENT’S REPORT

DATE: June 2, 2017
TO: Brenda J. Billingsley, Director, Purchasing Division
THRU: Carla Byrd, Purchasing Manager, Purchasing Division **CARLA BYRD**
FROM: Michal Durden, Purchasing Agent, Purchasing Division **MICHAL DURDEN**
SUBJECT: Most Reasonable Source PASSUR Data Subscription Services

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ou=Organization, ou=BCC, ou=PU, ou=Users,
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Date: 2017.06.02 15:34:13 -0400

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ou=AVA, ou=Users, cn=MICHAL DURDEN
Date: 2017.06.02 15:28:23 -0400

REFERENCE: AVI0000199 ESTIMATED VALUE: \$3,400,000

Using Division[s]: Information Systems, Aviation Department

AGENT ANALYSIS: PASSUR Aerospace Inc. (PASSUR) is the provider of PASSUR Data Subscription Services which has been in use at the Broward County Fort Lauderdale-Hollywood International Airport (FLL) since 1999. These software data subscription services are proprietary software applications engineered, developed, supported and maintained solely by PASSUR.

The Aviation Department is currently utilizing the following PASSUR's proprietary software modules and data subscriptions which are Landing Fee Audit Module; Landing Fee Billing Module, Class II Noise Feed, RightETA, Integrated Traffic Management (PITM); Web Tracker. The Aviation Department is requesting to procure a new module the Surface Optimization Program to more efficiently and effectively assist with gate scheduling, resource planning and managing flights in and out of FLL.

PASSUR modules allow for the Aviation Department (BCAD) to efficiently operate the airport through direct integration of the data into PropWorks Airport Gate Management System (PropWorks). The detailed information received from PASSUR allows PropWorks to be more efficient to invoicing the airlines and other billing activities accurately.

PASSUR has radar equipment on location at FLL in order to provide a higher level of detailed data that is collected from aircraft transponders as they arrive and depart from FLL. The quality of their data has a proven track record and acceptance by the airlines as the industry standard.

The Purchasing Agent compared module pricing using previous Procurement Contract No. Z1136719Q. Since the previous contract was awarded in October 2013, prices for All Urban Consumers for Miami-Fort Lauderdale (CPI) have increased 5%. Based on the fact that three of the six modules' pricing remained the same or decreased, two other modules' pricing increased; however, these two modules are less than the CPI increase over the last three years. Refer to table below.



<u>Description</u>	<u>Unit</u>	<u>Procurement Contract No.</u> Z1136719Q1	<u>New Agreement Pricing</u>	<u>Increase</u>
Landing Fee Audit Module	Month	\$3,430.00	\$3,641.00	6%
Landing Fee Billing Module	Month	\$3,570.00	\$3,499.00	-2%
Class II Noise Feed	Month	\$2,660.00	\$2,660.00	0%
RightETA	Month	\$2,550.00	\$2,295.00	-10%
Intergrated Traffice Management Module	Month	\$5,850.00	\$5,967.00	2%
Web Tracker	Month	\$2,250.00	\$2,295.00	2%
		October-13	October-16	Increase
CPI - All Urban Consumer		238.858	251.571	5.33%

RECOMMENDATION AND REASONS: I recommend approval for the following reasons:

The use of another reporting system entails changing the basic PASSUR system, as well as having a provider install radar equipment. The vendor has agreed to hold pricing for the three-year initial term. Based on these facts and those previously provided, it is in the County's best interest to approve this most reasonable source.

APPROVAL AUTHORITY

APPROVE

DISAPPROVE

RECOMMEND APPROVAL BY THE BOARD OF COUNTY COMMISSIONERS

Reason/suggested action (if disapproved):

Comments:

**BRENDA
BILLINGSLEY**

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Date: 2017.06.02 15:48:21 -04'00'

Signature/Title

Exhibit 1 – Most Reasonable Source Memorandum





AVIATION DEPARTMENT - Fort Lauderdale/Hollywood International Airport

2200 SW 45 St. #101 • Dania Beach, Florida 33312 • 954-359-6100

DATE: October 13, 2016

TO: Brenda J. Billingsley, Director
Purchasing Division

FROM: Douglas P. Wolfe, Assistant Director of Aviation Admin/Finance
Aviation Department 

SUBJECT: **Most Reasonable Source** – PASSUR Data Subscription Services – Landing Fee Management Billing Module, Landing Fee Management Audit Module and Operations Archive, Integrated Traffic Management (PITM), Web Tracker, RightETA, Noise Feed / Aircraft Flight Tracker, and Surface Optimization Program

RQM # _____

I have reviewed the following sole source justification and concur with subject request, fully understanding the implications of Section 838.22 of the Florida Statutes:

- (2) "It is unlawful for a public servant, with corrupt intent to obtain a benefit for any person or to cause unlawful harm to another, to circumvent a competitive bidding process required by law or rule by using a sole source contract for commodities or services."
- (5) "Any person who violates this section commits a felony of the second degree, punishable as provided in s. 775.082, s. 775.083, or s. 775.084."

The Aviation Department's Information Systems Division (BCAD-IS) is requesting that PASSUR Aerospace be designated as the most reasonable source for the PASSUR Landing Fee Management Billing Module, Landing Fee Management Audit Module and Operations Archive, Integrated Traffic Management (PITM), Web Tracker, RightETA, Noise Feed / Aircraft Flight Tracker, and Surface Optimization Program. These software subscription services are proprietary software applications engineered, developed, distributed and maintained exclusively by PASSUR Aerospace (PASSUR). Technical support and maintenance services are solely performed by PASSUR staff and PASSUR is the sole provider of these services.

BCAD currently subscribes to the PASSUR Landing Fee Management Billing Module, Landing Fee Management Audit Module and Operations Archive, Integrated Traffic Management (PITM), Web Tracker, RightETA, and Noise Feed / Aircraft Flight Tracker under Master Agreements # Z1006507Q1, # Z1354101Q2, and # Z1136719Q1.

PASSUR Aerospace is the sole developer and provider of PASSUR data and their subscription service. There are other sources of airline data available in this market, however PASSUR has installed radar equipment on location at the FLL airport in order to provide a higher level of detailed data that is collected from the airplane transponders as they arrive and depart from the airport. They are the only vendor with this radar equipment installed at the airport. The quality of their data has a proven track record and acceptance by the airlines as the industry standard.

PASSUR is a subscription service that requires minimal investment dollars from BCAD. Should other sources or services providing this level of data be identified at a later time, there would be minimal investment lost for BCAD and we would be able to easily transition.

Landing Fee Management Billing Module, Landing Fee Management Audit Module and Operations Archive

BCAD currently subscribes to PASSUR for these modules associated with the billing process which allow BCAD to more efficiently invoice and collect revenue in a timely manner. PASSUR has a tested and proven interface used by many airports with PropWorks, the Property and Revenue Management system used at BCAD. The airlines have confidence in the quality of data from PASSUR and any billing discrepancies are handled directly between the airline and PASSUR.

Integrated Traffic Management (PITM) and Web Tracker

BCAD currently subscribes to the PASSUR Integrated Traffic Management (PITM) and Web Tracker to more efficiently operate the airport by using this data to preplan aircraft movement, thereby reducing delays on the ground. The PASSUR Integrated Traffic Management Subscription for airports is currently subscribed to by 23 airports across the country, as well as the top eight North American airlines, in order to share critical real-time status, update, and operational decision-support information. This allows BCAD to effectively manage diversions, DOT Tarmac Delay Rule violations, the new FAR 117 Flight Crew Rest Rules, as well as the resulting delays, cancellations, fines, and disruptions. This subscription allows FLL to be a part of same-day, real time operational data exchange as equal partners with the airlines and the FAA, to manage these expensive and complex issues collaboratively. BCAD staff has the ability to track, manage, and distribute critical, timely airport information from a single platform that is viewable to the entire aviation community. Real-time diversion, tarmac delay, congestion, demand/capacity imbalances and other metrics are all automatically alerted and tracked predictively, in real time, and in reports. As part of this subscription, BCAD has access to automated mobile and onscreen airline updates from the IATA tactical information portal, via a two-way airline-airport communication flow unique to the PASSUR subscription service. The subscription allows FLL operations staff to access a real-time view of the airport surface operation.

RightETA

BCAD currently subscribes to the PASSUR Right ETA Data for integration into the Airport Gate Management System. This subscription allows BCAD to more efficiently operate the airport through the direct integration of the PASSUR data into the PropWorks Airport Gate Management System, providing a more efficient use of airline flight information. The subscription allows BCAD to have an enhanced level of detailed information in the PropWorks Airport Gate Management System to facilitate more efficient gate scheduling and resource planning.

Noise Feed / Aircraft Flight Tracker

BCAD currently subscribes to the PASSUR Noise Feed and Aircraft Flight Tracker for the purpose of tracking noise levels at the airport as part of the noise program. PASSUR is the sole developer and provider of PASSUR Noise Feed and Aircraft Flight Tracker. They are the only vendor with the required radar equipment installed at the airport to provide this data feed.

Surface Optimization Program

In addition to the above existing subscriptions, BCAD is requesting PASSUR be designated as the most reasonable source for their Surface Optimization Program, implementation services, and technical software support and maintenance services for the Fort Lauderdale-Hollywood International Airport (FLL). The PASSUR Aerospace Surface Optimization Program is a proprietary solution that is engineered, developed, distributed and maintained exclusively by PASSUR Aerospace (PASSUR). Technical support and maintenance services are solely performed by PASSUR staff and PASSUR is the sole provider of these services.

BCAD has a critical operational need to provide common situational awareness to all airport stakeholders on aircraft surface movement including the BCAD Airport Operations Control Centers, BCAD Gate Control, US Custom Border Patrol (CBP), Airline Representatives, all Ramp, Fueling Contractors and the RVA South Ramp Tower. This solution will provide essential accurate data on each flight, allowing each stakeholder to plan and be prepared for their responsibility and have the ability to effectively react to any last minute changes as it pertains to surface metering.

The addition of the Surface Operations Optimization program will allow BCAD to more efficiently and effectively sequence and manage flights in and out of the gates as a function of dynamically changing airline priorities. It contains a Collaborative Gate Allocation and Sequencing Platform containing Predictive Analytics that is designed to enable all the airlines to manage their revised priorities for arrival and departure sequencing which will mitigate problems with extended gate-holds and taxi in times. It will reduce manual coordination and gate delays through an Automated Common Data Exchange which will make all stakeholders aware of their flight's status and sequence to the gate, thus reducing gate hold out delays and missed gate opportunities. This product will facilitate increased passenger flow through U.S. Customs facilities as a result.

The PASSUR Surface Operations Optimization program is currently subscribed to by two airports in North America, and is presently in use by JetBlue, American Airlines, and United Airlines at several airports across the U.S. This product will enhance FLL's ability to exchange same-day, real time operational data as equal partners with the airlines and the FAA, to manage these expensive and complex issues collaboratively. The Predictive Analytics algorithms in use by PASSUR are unique to this product. This product used in combination with PASSUR Audit Module and Operations Archive, Landing Fee Management Subscription, and Integrated Traffic Management Subscription will assist FLL with improving real-time data exchange for both internal and external customers including the FAA Command Center, which will not only enhance operations at FLL, but for the National Airspace System as well.

This solution addresses the following functional requirements:

- To provide BCAD Gate Control with the most accurate and timely airline data to allow them to efficiently and effectively assign gates to flights in order to reduce gate holds, reduce gate delays, reduce turn times and reduce unused gates.
- To enable BCAD to sequence and manage flights in and out of the gates as a function of dynamically changing airline priorities. A Collaborative Gate Allocation and Sequencing Platform will allow all stakeholders to see the gate assignments in advance, reducing manual coordination and gate delays. All stakeholders will be aware of their flight's status in the gate sequence and will be aware of gate changes instantly without having to make a call to BCAD's Gate Control personnel. Stakeholders can preplan their gate operations and make automated priority requests that could be honored by either the BCAD Gate Controller or the RVA South Ramp Tower Controller. This platform will reduce workload for all stakeholders, increase gate efficiency and improve gate operations overall.
- To reduce gate hold out delays, missed gate opportunities, reduce gate pushback delays and improve passenger flow through the CBP facility. Each participating airline's load information would be available to CBP. This information, along with other critical gate data can be used to make gate assignment decisions that could reduce airline gate delays and turn times.
- To provide the RVA South Ramp Tower Personnel with accurate relevant operational data and most importantly, accurate gate status. The Sequencing Platform, provided on existing computer hardware they are using today, will improve their operation by reducing controller administrative and operational workload by streamlining the operation and making it more efficient.

The PASSUR Surface Optimization Solution is unique in that it provides an automated common data exchange that natively integrated into existing solutions in place with PASSUR. This single platform solution aggregates and re-distributes real time information for gates (assignments and status), flights (multiple predicted and actual milestones for arrival/departure), passenger nationality mix, CBP capacity/status, and airline sequencing priorities.

This solution is intended to address the lack of timely information to gate planners and ramp controllers regarding gate occupancy status, arrival ETA, departure ready state, status of aircraft already taxiing in, and cancellations. This single "clearinghouse" where all the essential data elements from the different stakeholders are gathered, processed into useful information, and then displayed and distributed to support specific operational, business, and decision making functions.

Typically there are numerous sources for the different pieces of information needed, sometimes overlapping sources, and the task is to ensure that the most accurate, reliable data is acquired from all the stakeholders. The PASSUR Surface Optimization Program provides a Collaborative Gate Allocation and Sequencing Program on a single platform that allows all FLL stakeholders to see gate assignments and gate changes; allows airlines to communicate changing priorities and requests for gate arrival and pushback sequences, and BCAD and/or RVA to reallocate gates/reorder sequence on the same platform; and allows CBP to update status of passenger processing and release of flights post-security sweep.

This platform is designed to enable all the airlines to manage their revised priorities for arrival and departure sequencing, and will be deployed to reduce extended gate-holds, taxi in times, and related issues.

This is an emerging technology solution for airports in the United States and there are only two vendors that have a product in this space. BCAD staff evaluated these two vendors that offer a solution to address BCAD's requirements, however only the PASSUR solution possesses key features that distinguish it from the other solution.

The evaluation criteria information is summarized in the table below:

Evaluation Criteria	PASSUR	Harris
Features/Functions		
Arrival Versus Departure Metering	X	
Dynamic Gate Allocation	X	X
Radar for Non-Cooperative Tracking	X	X
Surveillance data Sources	X	
Integration		
Interoperability with existing systems	X	
Leverage existing airline studies or relationships for solution development	X	
Content can be shared between other components across multiple systems of vendor provided solution	X	
Maintenance & Support		
Phasing Plan/Ramp Up Time required	X	
Solution Native to Vendor Software, Outsourcing of Solution	X	
Established vendor in the Surface Optimization Space Current/Successful Deployments in similar airports	X	

The criteria which are critical to the airport environment and the success of the implementation of this solution include:

Ability of the solution to meet the requirements set forth by BCAD

- Harris has a departure metering solution available, but not an arrival metering solution. PASSUR has an existing arrival metering solution.
- If the FAA system is down, PASSUR has the additional data sources available. There is no dependency on a single source of data as with Harris.

- PASSUR already has radar on the airport and will use this to provide data for the surface optimization solution. Harris would need to install a radar system on the airport as part of their solution in order to provide non-cooperative tracking information.

Integration with existing systems

- The proposed solution from Harris would require replacement of BCAD's existing Gate Control system.
- Harris does not have any deployments of their solution in other airports, only with NAVCanada.
- PASSUR has already completed studies with JetBlue and Southwest Airlines to build the solution. BCAD can leverage the investment these airlines have already made with PASSUR.
- Harris has not performed any studies or established any relationships with airlines on their surface metering solution.
- PASSUR's content can be shared across the other data subscription services BCAD currently has in place.

Maintenance and support of the solution

- Harris requires a significant amount of ramp up time and phasing to deploy their solution while PASSUR has established implementations and relationships with airlines they are able to leverage to provide their solution in an expedited manner with less phasing and customization.
- PASSUR is providing the solution natively as part of their software solutions. Harris purchased Excellis which is the company that developed their surface optimization solution for NAVCanada.
- PASSUR is an established vendor in this emerging technology of surface metering and optimization. They have installations at Toronto, Seattle, Boston, and JFK.

In addition to the justification in this memo, PASSUR has provided a listing of sole source support and patents related to this procurement (see attached). Also attached is a letter from the airlines supporting this procurement and detailing the investment the airlines have already made in their PASSUR relationship.

The Aviation Department is requesting PASSUR Aerospace be designated as the most reasonable source for PASSUR Data Subscription Services – Landing Fee Management Billing Module, Landing Fee Management Audit Module and Operations Archive, Integrated Traffic Management (PITM), Web Tracker, RightETA, Noise Feed / Aircraft Flight Tracker, and Surface Optimization Program, Implementation Services, and Technical Software Support and Maintenance Services for the Fort Lauderdale-Hollywood International Airport (FLL).

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I, Michal Durden, concur with the above request, which has been examined by me, and the required due diligence has been performed (refer to Procurement Code Section 21.34 Sole Source Procurement, and 21.35 Sole Brand Procurement).

Date: _____

Estimated Amount: \$ _____

Only one source

Only one reasonable source

Sole Brand

RFI attached

Rejected – see additional information

Additional Information:

Passur Aerospace Inc. is the sole developer and provider of PASSUR Data Subscription Services which has been in use at the Fort Lauderdale-Hollywood International Airport (FLL) since 1999. The Aviation Department is currently utilizing three of PASSUR's proprietary software modules and data subscriptions which are Aircraft Flight Tracking, Landing Fee Audit and Operations Archive which includes Proactive Billing and RightETA that works in conjunction with Airport Gate Management System

EXHIBITS: (attach supporting documentation)

Signature
Approved by the appropriate Award Authority

Title

Date



PASSUR Sole Source Support
Updated June 28, 2016

PASSUR is uniquely able to address the needs of the FLL airport-airline community in the area of coordinated surface traffic management, based on the following key attributes:

Integrated Surveillance Network and Integrated Aviation Database

PASSUR owns and operates one of the world's largest and most extensive private commercial aviation surveillance networks (more than 180 sites) *including FLL*. The PASSUR Network integrates and fuses additional key surveillance sources, to include ADS-B, ASDE-X, Mode S, En Route Radar, Airline OOOI data, ACARS, fleet databases, as well as other sources. The PASSUR Network creates a direct data feed of critical flight and airspace behavior and conditions, an essential underlying resource for the predictive analytics, real-time decision support, and performance analysis tools that are part of the PASSUR surface management solution, including many of the patented processes listed below. *There is no other comparable commercial surveillance and data resource in the industry.*

Predictive Analytics

PASSUR decision support solutions are supported by predictive analytics algorithms, which use extensive historical data mining and pattern recognition to predict specific and detailed operating conditions, as well as dynamic predictions based on the extrapolations of real-time surveillance data. *PASSUR has more than 10 years of flight, airport, and airspace historical data stored – there is no comparable commercial source of historical data, or of independent live surveillance data.*

The PASSUR Collaborative Network

The PASSUR platform, which includes surface management, also includes a collaborative layer that allows for instant information sharing and coordination across a wide range of users in the aviation community. Fort Lauderdale and its airline community are full members of the collaborative layer of the PASSUR platform, which provides access to more than 100 airports and 125 worldwide airlines – *a resource unavailable from any other provider.*

Existing, widespread adoption at FLL (and System Wide)

The PASSUR platform, which includes surface management, has already been adopted by many of the primary commercial airlines operating at FLL, including Delta Air Lines, Jetblue Airways, and Southwest Airlines. *Adding PASSUR surface management to the collective FLL airport-airline community recognizes the widespread adoption of the PASSUR surface management platform that already exists at the airport, and across the NAS (5 largest US airlines, 60+ airports, IATA)*

Intellectual Property

PASSUR has made extensive investments in developing its surveillance, data, and software architecture, resulting in capabilities exclusively available to our customers. Please see the list of PASSUR patents relevant to the FLL surface management solution on the next page.

Relevant PASSUR patents

1. **Reducing Airport Delays: US patent #8,612,126**
Reducing Airport Delays using information and analytics -- producing the most streamlined and efficient metered departure queues by matching the current weather forecast to historical arrival and departure performance data under weather conditions identical to those forecasted.
2. **System and Method for Airport Surface Management: US patent #8,554,457**
Focused on generating more precise and effective assigned taxi times based on predicted surface saturation and surface conflicts
3. **System and Method for Airport Surface Management: US patent #9,171,476**
Establishing flow rates on the surface operation through predicted congestion and traffic, by ingesting and processing multiple data sources and conditions
4. **System and Method for Departure Metering from Airports: US patent #9,180,978**
Automated allocation of departure slots using a variety of data inputs, with dynamic adjustments for changing conditions
5. **Surface Management at an Airport: US patent #8,473,126**
Calculated slot assignments using metrics like schedule, flight plan, and change requests, among other variables.
6. **Stranded Aircraft Alerts: US patent # 8,199,030**
System for managing and alerting for tarmac delays
7. **Tail Number Acquisition: US patent #8,145,612**
System and method for Multi-Stage Tail Number Acquisition
8. **Predicting Aircraft Gate Arrival Times: US patent # 8,140,199**
System and method for predicting aircraft gate arrival times
9. **Flight Track Display System: US patent #8,068,039**
Flight Track Display System using data for a plurality of sources
10. **Filling Available Airspace with Airplanes: US patent #7,890,247**
System and method for filling available airspace with airplanes to improve airport efficiencies
11. **Reducing Airport Delays Using Passive Radar: US patent #7,778,768**
Focuses on indicating the current arrival spacing efficiency
12. **Predictive Arrival and Departure Rates: US patent #9,142,134**
Predicting and targeting airport arrival and departure rates



To: Mr. Mark E Gale, A.A.E.
CEO/Director of Aviation
Fort Lauderdale-Hollywood International Airport,
Dania Beach, FL, 33312

Dear Mark,

On behalf of more than 18,000 Crewmembers at JetBlue Airways, I am writing regarding the ongoing discussions between JetBlue, Southwest and Spirit Airlines on a proposal to advance surface management at Fort Lauderdale/Hollywood International Airport. We believe this approach would create an operations opportunity to demonstrate airport surface efficiency with airline stakeholder inclusion with data sharing as a win-win for airlines, GA, FAA and aviation in our nation.

Recognizing the tremendous progress and planning that has already taken place at FLL with growth from new runway, terminal construction, as well as what we believe is achievable within the framework of future plans, JetBlue offers the following proposal for your consideration:

1. Create an automated common data exchange platform that aggregates and re-distributes real time information;
2. Create a collaborative gate sequencing platform that allows FLL stakeholders to see gate assignments and gate changes;
3. Create a common situational awareness platform to communicate key elements of FLL operation.

As part of the tremendous investment all of us have made to date JetBlue has already invested with PASSUR in program development and site surveys at FLL. Additionally the recent awarding of non-Havana Cuba routes to 3 separate airlines out of FLL and the pressure this will place on the 6 international gates to meet the added flight activity volume, the necessity to have software to support the tracking of airfield flight activity is critical for the daily operation of the airport, not to mention the benefits during irregular operations.

We believe it is the common interest for this program to move forward to unify our efforts and consider the attached proposal in order to provide a realistic assessment of how beneficial the product is for all of us as well as how much time & money is actually saved as a result. I believe that the likelihood of realizing the benefits of collaboration by partnering on such a proposal outweigh any of the challenges which I believe we can jointly overcome. Our team is eager to meet with you on this and move forward and as such, look forward to hearing back from you.

Sincerely Joe Bertapelle,

A handwritten signature in blue ink that reads "Joe Bertapelle". The signature is fluid and cursive.

Director of Strategic Air Space Programs

CC: Jason Annunziata
Ian Deason
Joanna Geraghty
Jeff Martin



Mike Stine

Rob Land

Mr. Michael A. Nonnemacher - A.A.E (Director of Operations)