Dear Reader,

It’s been a year since the European Commission issued the Data Link Services Implementing Rule (DLS IR) mandating European Air Navigation Service Providers (ANSPs) to implement Controller Pilot Data Link Communication (CPDLC) above FL285 in Western Europe. Northern and Eastern Europe ANSPs benefit from an additional two years delay, until February 2015, to get ready.

It’s also been a year since David Bowie issued the first single from his latest album. While the title, “Where are we now?” probably did not refer to the status of the European DLS IR, it’s quite a good question to ask ourselves. So, where are we now with the deployment of continental CPDLC over VHF Data Link (VDL) mode 2 in Europe? Well, the least we can say is we are actually facing a series of teething problems. And by “we”, I mean all the stakeholders, including avionics vendors, airframers, ANSPs, EUROCONTROL and Communication Service Providers.

Technical issues with the VDL segment are causing an increasing number of CPDLC disconnections – a problem known as a “Provider Abort” (PA). This results in some ANSPs (such as Maastricht UAC, DFS and Skyguide) to limit CPDLC access to a certain type of avionics. Also, the high density of deployed VDL stations and current use of a single VDL frequency by all aircraft are considered as potential contributors to PAs. Further investigation will be necessary to come up with clear conclusions and a proposed enhancement roadmap.

In the early 90s, the Aircraft Communication and Reporting System (ACARS) technology started being used for Air Traffic Control (ATC) purposes. It allowed the transmission of pre-departure (PDC/OCL) and oceanic clearances (OCL), digital Automatic Terminal Information Service (D-ATIS) and supporting initial Future Air Navigation System (FANS) applications over oceanic airspace. The system had already been used for almost a decade for Airline Operational Communication (AOC) purposes, so had time to grow and mature enough to provide a reliable and efficient communications link.

The context is very different for VDL, as pretty much all airlines are deploying VDL fleet – either new aircraft (forward fit) or existing aircraft (retrofit) – at the same time in order to comply with the European mandate. That results in loads of brand new avionics to try to communicate with recently deployed VDL stations over a single frequency.

Nevertheless, a solid, mature and reliable datalink infrastructure is the necessary cornerstone on which to further develop 4D trajectory concepts, support initial Single European Sky ATM Research (SESAR) trials and prototype deployment. Moreover, initial operational CPDLC communications depend on a datalink system, and the ATC community cannot afford to simply wait and see, hoping the situation will magically improve.

But the operational context is complex, and in addition to legacy Communication Service Providers (CSPs), a number of European ANSPs have decided to take the responsibility to deploy, own and operate their own VDL infrastructure. As a result, addressing current issues will require the whole community (ANSPs, CSPs, avionic vendors and airframers) to work together to investigate and solve PA issues. In the future, they will have to coordinate overall VDL system evolutions.

In a recent report, the Lufthansa Group advised that defragmenting European airspace and achieving a Single European Sky (SES) would enable it alone to cut its annual fuel consumption by about 270,000 tonnes – enough to fly an Airbus A380 from Frankfurt to San Francisco and back about 1,000 times. Very likely, defragmenting European VDL infrastructure would not have the same effect on CO2 emissions, but it could enable a more efficient and reliable VDL system. Yet, how such Single European Data Link Sky could be achieved is still to be invented.

If you would like to discuss the subject, please come and see us at the CANSO World ATM Congress 2014, Hall 9, Stand 434!

Yours sincerely,

Francois Bardin
Director – ATS AIRCOM
Air Traffic Management (ATM) in Europe is the duty of more than 40 national Air Navigation Service Providers (ANSPs), who assume control over many different types and shapes of airspaces.

This situation is often described by the term “fragmentation”, and has been the source of much inefficiency. For example, these 40 ANSPs all operate and maintain their own separate Communications, Navigation, Surveillance (CNS) infrastructure. For decades, EUROCONTROL has played an important role in coordinating and harmonizing Air Traffic Control in Europe. It has been granted the role of Network Manager for the Single European Sky initiative, which was launched by the European Commission.

To do that, EUROCONTROL has initiated a pan-European program called Centralized Services. Its objective is to reduce the cost of CNS infrastructure by centralizing the provision of some of the services. The idea is that the cost of a single centralized service will be less than the cumulated costs of 40 services, as currently provided by each national ANSP. EUROCONTROL has listed nine projects that have natural candidates for these new centralized services. They typically involve handling data and range from a service for trajectory planning in four dimensions, to support for an improved, pan-European approach to effectively share airspace between civil and military traffic.

Throughout 2013, EUROCONTROL spent considerable effort to define the operating concept of each of the nine services and concentrated on the European ANSPs and ATM industry. The model proposed by EUROCONTROL is to operate Centralized Services on a pan-European basis by contracting selected industrial partners, including ANSPs, for the provision of the industrial solution.

SITA supports the move of the European ATM industry towards Centralized Services, as well as the distribution of roles and responsibilities by EUROCONTROL to all of the European ATM industry. As SITA is a provider of pan-European and globally-centralized services, it is in a natural position to contribute to this initiative. It contributes to European ATM defragmentation too, and the associated reduction of ATM charges to Air Transport Users who are the main shareholders of SITA’s Governance Structure.

Currently, the nine centralized services appropriate for implementation at European ATM-network level are:

**CS1: Flight Plan and Airport Slot Consistency Service (FAS)** – checks the consistency of flight plans against airport slots on a centralized basis.

**CS2: 4D Trajectory Flight Profile Calculation for Planning Purposes Service (4DPP)** – a centralized service for calculating and communicating 4D trajectory profiles with increased accuracy.

**CS3: European Tracker Service (ETKR)** – creates a Europe-wide, consistent and a high quality picture of the air situation.

**CS4: Advanced Flexible Use of Airspace Support Service (AFUAS)** – collects and provides airspace management data that enables more efficient and effective use of available airspace.

**CS5: European ATM Information Management Service (EAIMS)** – a development of the existing European AIS Database (EAD) service to include all pre-departure static and dynamic data, such as airport information, weather and digital Notice to All Airman (NOTAM).

**CS6: Management of Common Network Resources Service (CNR)** – improves the management of scarce resources, such as transponder codes and radio frequencies, by handling them on a unified basis across applicable areas.

**CS7: Network Infrastructure Performance Monitoring and Analysis Service (NIPS)** – ensures the safe function and anomaly resolution of common/distributed CNS infrastructure.

**CS8: Pan European Network Service (PENS)** – as data interchange increases, this service would meet all ground communication needs between sites and partners (based on internet protocol).

**CS9: Data Communication Service (DCS)** – data communication service between the air and ground to support services such as data link, AOC services, ADS-C and flight information.

The combination of networking, scalable shared IT infrastructure services, mission-critical-end-user computing services, air/ground data communication services, application performance management and global messaging services supported globally by ITIL-based processes and aligned with service management operations, enable SITA to be a key contributor to the European Centralized Services initiative.
SITA IS INVOLVED IN PROJECTS UNDERTAKEN BY THE SINGLE EUROPEAN SKY ATM RESEARCH JOINT UNDERTAKING (SESAR JU).

The SESAR JU aims to develop a modernized air-traffic-management system for Europe. This system will ensure the safety and fluidity of air transport over the next thirty years, make flying more environmentally friendly, and reduce the costs of air traffic management.

The SESAR JU launched the Air Traffic Control Full Data Link (AFD) project with the objective of demonstrating how commercial flights can be guided seamlessly through controlled airspace using ATN Build 1 – equipped aircraft. This will involve voiceless Controller Pilot Data Link Communications (CPDLC) for routine operations such as clearances, handover and routing instructions.

The AFD trials will extend the use of CPDLC – even below Flight Level 285. The project’s aim is to create an end-to-end operational scenario for the safe handling of continental commercial flights – without the need for voice radio telecommunication between controllers and crew.

AFD is led by the Italian Civil Aviation Authority (ENAV) and includes consortium members: Airbus, Boeing, UK NATS, EasyJet, Air France, SELEX-SI and SITA. In 2013, SITA took a major step to interconnect Aeronautical Telecommunication Network (ATN) infrastructure from ENAV with the validation systems from Boeing in Seattle, US and Airbus in Toulouse, France. This will complete the experimental plan section of the project.

The ENAV AFD platform was successfully connected with the Airbus and Boeing test bench. The correctness of CPDLC message exchange was also tested.
The need for an international communication network became clear after telecommunication providers started to withdraw point-to-point connections, and IP-based network became a prerequisite for new and emerging applications. In Europe, the solution for Air Traffic Management (ATM) international connectivity is the Pan-European Network Service (PENS).

PENS is an international ground to ground communications infrastructure jointly implemented by EUROCONTROL and European Air Navigation Service Providers (ANSPs). It provides a managed and common IP-based network service across Europe. This covers voice and data communications, provides support to existing services and meets the requirements of future Air Traffic Management (ATM) concepts. You can find more information on PENS’s capability and benefits on the EUROCONTROL website: http://www.eurocontrol.int/articles/pan-european-network-services-pens

After signing contracts with SITA in October 2009, PENS now operates at 140 points of presence in 45 countries around Europe. Mainly, it supports: EUROCONTROL Centralized Services – such as Enhanced Tactical Flow Management (ETFM) and the European AIS Database (EAD) – to implement operational air traffic control (ATC) voice communications between EUROCONTROL and European Area Control Centers (ACCs).

After extensive testing, ANSPs have started to migrate their operational applications over to PENS. These include Flight Message Transfer Protocol (FMTP), Air Traffic Services Message Handling Services (AMHS) and Radar distribution. NATS, EUROCONTROL MUAC, Austro Control, Navirair, Belgocontrol, LVNL, Slovenia Control and Croatia Control now operate over PENS. This achievement is the result of a great deal of hard work from ANSPs, and the PENS Management Unit (PMU) at EUROCONTROL and SITA.

“I would like to pass on my personal thanks to everyone who has contributed to the achievement of this significant milestone”, said Mustafa Gunsaya, the Head of the Network Team of NATS and Chairman of the PENS User Group (PUG).
PENS demonstrates its ability to meet the very demanding communication requirements of ATM applications, as well as the future requirements of the Single European Sky concept. The success of the deployment of PENS, with the ANSPs, SESAR is now being transmitted over AMHS. Another third is planned to be completed in 2014, with the migration to AMHS between DFS and EUROCONTROL. The decision by EUROCONTROL’s Provisional Council to extend PENS geographic coverage to any ANSP of the International Civil Aviation Organisation (ICAO) European (EUR) and North Atlantic (NAT) regions – and even to bordering states – highlights the potential of PENS. Over 70 additional ANSPs could join this growing group. 2014 will be the year of PENS acceleration, with many ANSPs announcing their plans to migrate their operational applications to run on PENS. SITA estimates the migration to PENS of the ANSPs in the ICAO EUR/NAT region will generate more than 50 million Euros of savings for ANSPs within the next 10 years. Accelerating the migration to PENS could lead to a potential further saving of 14 million Euros.

GLOBAL HIGHLIGHTS

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The Global HIGHLIGHTS report highlights the progress of the implementation of PENS, as well as the benefits it brings to the aviation industry. The report highlights the benefits of PENS in terms of improved efficiency, reduced costs, and enhanced safety. It also emphasizes the importance of international cooperation and the need for continued investment in the development and deployment of PENS. The report concludes with a call to action, urging stakeholders to continue to support the development and deployment of PENS to ensure the continued success of this important initiative.

EUROPEAN DATALINK CHALLENGES

Datalink Communications between aircraft and ATC systems on the ground is crucial to the success of current and future ATM concepts. The European Implementing Rule on Data Link Services (DLS-IR) – which mandates the use of Controller Pilot Data Link Communication (CPDLC) applications on top of ATN/VDLm2 – enables the deployment of air-ground communications. According to the Implementing Rule, the service had to be operational in Western Europe from January 2013. EUROCONTROL Maastricht and the ANSPs of Germany, the United Kingdom and Switzerland are now operational. As long as EUROCONTROL Maastricht was the sole ATC center offering CPDLC over ATN/VHF Data Link mode 2 (VDLm2), the fulfilment of the performance objectives as defined by the EUROCONTROL Link2000+ Program was not an issue. However, with the service now operational in more airspace, with increasing numbers of flights operating the service and equipped aircraft, performance issues have appeared in the form of “Provider Aborts”. The ATC Centers at Maastricht, Karlsruhe, Geneva and Zurich report troubling levels of aborted CPDLC communications.

The Data Link Implementation Steering Group (DLISG), chaired by EUROCONTROL (which groups all stakeholders in the Data Link Mandate) is looking into the “Provider Abort” issue. SITA actively participates in the DLISG. A number of causes are suspected, distributed over all elements of the CPDLC chain. But the DLISG can only work on a voluntary basis, and meets twice a year. Structured efforts and committed expertise are required to investigate the issue, identify the root causes and propose corrections. While the EUROCONTROL Link2000+ program performed extensive validation of ATN/VDLm2 technology, the scaling associated with real deployment over a continent cannot be fully reproduced on test platform or with simulation tools.

Initiatives are being launched by different stakeholders and the European Commission to speed up resolution of Provider Aborts. The European Aviation Safety Agency (EASA) and the SESAR JU have recently been asked by the European Commission to contribute to the resolution of the Provider Aborts issue. SITA welcomes such initiatives and is determined to support them with its practical experience. SITA is confident that the “Provider Abort” issue and VDLm2 multi-frequency focus group can be successfully addressed by the datalink community if all stakeholders act quickly, efficiently and together.

SITA is a proud contributor to the development and deployment of PENS. We believe that PENS is a key element in the future of ATM, enabling the industry to meet the challenges of increased traffic and reduced costs. SITA is committed to supporting the development and deployment of PENS, and we look forward to working with all stakeholders to ensure the continued success of this important initiative.
**OVERVIEW**

The concept of Air-Ground System Wide Information Management (SWIM) has been developed within the SESAR and FAA NextGen programs. It redefines the way information is modelled (XML-based) and shared between the stakeholders using open standards. So far, deployment in a realistic environment had not been validated. They are currently deployed in Abu Dhabi, UAE and will be integrated to existing systems in 23 sites in Brazil in the next two to three years. Similar solutions will be implemented in 2014 in Tunisia, for Tunis and Djerba airports, expanding the solutions already installed in Monastir and Enfidha. Finally, a D-ATIS solution will be provided for the Régie des Voies Aériennes ATM modernization program in the Democratic Republic of Congo. This shows that SITA’s datalink solutions can be provided on a global level, for unique airports and for large implementations.

The **SITA AIRCOMclever**, **AIRCOMevatis**, **AIRCOMevamet** and **AIRCOMcats** systems from the **Airport Tower Systems** portfolio (which are the SITA Digital DCL, Digital ATIS, Digital VOLMET and Digital Centralized ATS Server COTS solutions) enable easy and turnkey implementations with a centralized server feature. They have recently been expanded to new sites including six major airports in India for AAI. The **SITA AIRCOM ADS-CPDLC workstation**, a FANS CPDLC/ADS-C standalone solution, will be deployed early 2014 for Angolan ANSP, ENANA, in Luanda. It’s similar to the solution provided to Ghana (GCAA) back in 2011.

The **SITA DL-FEP solution** has been expanded to UK NATS (at Swanwick and Prestwick ATC Control Center) and is now under deployment for AENA, Spain. Installed in Madrid AENA premises, the Spanish DL-FEP will eventually serve the five Spanish ATC Control Centers, supporting both FANS and ATN communications.

**PROPOSED SOLUTION**

The SESAR SWIM MasterClass project validates deployment of an A-G SWIM prototype in a realistic environment provided by SITA and Honeywell. In addition, SITA and WxFUSION provide some innovative weather services including turbulence and thunderstorm data displayed on an Electronic Flight Bag (EFB) in the cockpit environment. This way, SITA also acts as a Data Management Service (DMS) provider for the cockpit. This simplifies the timely delivery of tactical (flight optimization) and advisory (graphical display) decision-making data to the flight crew – beyond what exists today. This initiative could help pilots make more informed decisions to enhance safety and efficiency.

**AIR GROUND SWIM IN PRACTICE**

The Air-Ground SWIM will boost integration between aircraft and ground services, while preserving all security constraints. As more and more SWIM services become available on the ground, SESAR A-G SWIM aims to “air-enable” different types of ATM-related information services. With its air-ground datalink expertise, SITA has been working with key industry partners, bridging SESAR WP14 and WP9 to further refine Air-Ground SWIM infrastructure. In 2013, SITA actively participated in the A-G SWIM concept refinement, mock-ups, testing and demonstrations during the November 2013 SWIM MasterClass in Brussels. SITA helped demonstrate how A-G SWIM could actually operate.
REGIONAL HIGHLIGHTS

EUROPE

AUSTRIA

AUSTRO CONTROL SELECTS COMMUNICATION PROVIDERS FOR ATN/VDLM2 COVERAGE IN AUSTRIA

Austro Control contracted SITA in October 2013 for the provision of the ATN/VDLM2 service in Austrian airspace, in fulfilment of the European Mandate on Data Link Services. Austro Control also procures the Thalès ProATN ground router, delivered through the contract signed with SITA. To provide the required level of VDLm2 coverage in the Austrian airspace, SITA is using its existing network of VHF stations in Austria and surrounding countries, notably Germany where DFS is partnering with SITA for the provision of this service. SITA will also upgrade stations in Northern Italy and Slovenia to VDLm2.

NORWAY

AVINOR PROCEEDS WITH D-ATIS SERVICE IN STAVANGER AIRPORT, AND FANS SERVICE IN THE BODØ FLIGHT INFORMATION REGION (FIR)

AVINOR will be providing the D-ATIS service in Stavanger Airport and the FANS service in the Bodo FIR. After a public tender process, Avinor selected SITA as the air-ground communication provider for both services. D-ATIS and the FANS services are scheduled for operations towards the end of the first half of 2014.

UNITED KINGDOM

COMPLETE VDLm2 INFRASTRUCTURE DEPLOYED TO COVER THE AIRSPACES OF THE UNITED KINGDOM AND IRELAND

In 2012, NATS contracted SITA for the provision of the ATN/VDLM2 service in the British and Irish airspaces, in fulfilment of the European Mandate on Data Link Services. NATS contracted with SITA on behalf of the British-Irish Functional Airspace Block (FAB). The VHF stations network required to support this service included 25 VDLm2 sites in the United Kingdom, Ireland, Belgium, Netherlands, Denmark (including Faroe Islands) and Norway. The deployment was successfully completed in November 2013.

FRANCE

SITA AND DSNA AGREE ON MUTUAL SERVICE-LEVEL AGREEMENT FOR AIR-GROUND DATA LINK INFRASTRUCTURE

DSNA, the French ANSP, and SITA concluded a mutual service level agreement by which the SITA VHF station infrastructure in France will be transferred to DSNA, and used by SITA to provide air-ground communications to its airlines customers in the airspace under DSNA’s responsibility. The service level agreement determines the performance level on which DSNA will commit to SITA to satisfy airlines’ requirements for AOC traffic. In addition, this air-ground communication infrastructure will also permit DSNA to offer the ATN/VDLM2 exchange of data according to the European Mandate.

SPAIN

AENA PLANS COMPREHENSIVE DATA LINK COMMUNICATION INFRASTRUCTURE AND SYSTEMS TO SUPPORT CPDLC IN THE IBERIAN PENINSULA AND CANARIES ISLANDS

AENA, the Spanish ANSP, and SITA are closely collaborating on the deployment of additional VDLm2 stations in Spain that will permit AENA to offer a state-of-the art service to airlines, in fulfilment of the European Mandate on Data Link Services. AENA and SITA established a partnership in 2002, in which the SITA air-ground communication infrastructure in Spain was transferred to AENA. This infrastructure has been continuously improved. In January 2012, AENA contracted SITA for the complete upgrade of the existing network of stations, and to deploy 11 additional stations in the Iberian Peninsula, the Balearic Islands and the Canaries islands.

IRELAND

IAA FURTHER DEVELOPS PREFANS SERVICE IN SHANNON AND DUBLIN

The Irish ANSP, IAA, contracted SITA to provide the D-ATIS service in Shannon and Dublin, and the DCL service in Dublin. SITA deployed IP connectivity in Shannon to provide access to its AIRCOM network. In the near future, these links will also be used to support the ATN/VDLM2 exchange of data between SITA and IAA.

AFRICA – MIDDLE EAST

TUNISIA

OACA EXTENDED THE SITA DATALINK SERVICES TO PROVIDE D-ATIS AND D-VOLMET SERVICES

As part of a newly signed contract, D-ATIS and D-VOLMET will be deployed in 2014 in Djerba and Tunis. This will be an extension of the D-ATIS and DCL solutions already deployed in Tunisia in Tunis, Monastir and Enfidha for OACA. It will provide broader usage of the pre-FANS data link services provided by SITA to OACA so far.

DR CONGO

SITA IMPLEMENTS D-ATIS SERVICES IN KINSHASA

SITA also concluded a contract for end user, Régie des Voies Aériennes (RVA), in Democratic Republic of Congo, for the delivery of a D-ATIS solution for Kinshasa. This is part of an ATM modernization plan for this country, and will bring decisive modern means to the Air Traffic Control in the region.

SOUTH AFRICA

ATNS RENEWED SITA FANS AND PRE-FANS SERVICES FOR ADDITIONAL FIVE YEARS

As part of a concerted effort to increase availability and reliability of datalink services for ANSPs, SITA concluded an IP migration and five year service renewal contract with ATNS to migrate the current X.25 based legacy Pre-FANS and FANS datalink connections to IP-based connections which are more manageable and reliable solutions.
ANGOLA

ANGOLA TO IMPLEMENT ADS-C/CPDLC OVER ITS OCEANIC FIR

SITA concluded a contract with Empresa Nacional de Exploração de Aeroportos e Navegação Aérea (ENANA) for the delivery of a FANS ADS-CPDLC standalone system for Luanda ACC, Angola. The factory acceptance tests have been successfully passed, as well as the factory training in Paris. The local installation, commissioning and on-site trainings are scheduled for early 2014. Upon completion, ENANA will be able to fill the gap between JNB oceanic and ACC oceanic in providing reliable oceanic control using ADS-C/CPDLC services.

MIDDLE EAST

UNITED ARAB EMIRATES

ADAC SELECTS SITA TO IMPLEMENT D-ATIS SERVICE AT AL AIN

Pre-FANS D-ATIS D-solution has been contracted with ADAC, Abu Dhabi, for Al Ain International Airport, and successful Factory Acceptance Test (FAT) took place in Paris, while site acceptance tests and onsite training are to be completed early in 2014. This will provide Abu Dhabi with two airports with the D-ATIS service.

SAUDI ARABIA

SITA FINALIZED IMPLEMENTATION OF DATALINK IP GATEWAYS FOR GACA

SITA has successfully concluded the delivery and implementation of IP gateways at Jeddah and Riyadh to connect the GACA domestic network to the SITA Air Ground datalink network. This will enable GACA to seamlessly integrate its VHF datalink radios, provided in partnership with SITA, on to the SITA datalink network.

QATAR

QCAA SELECTED SITA TO PROVIDE FANS AND PRE-FANS SERVICES

SITA signed a five-year contract with the Qatar Civil Aviation Authority (QCAA) for the provision of DCL, DATIS and FANS 1/A Services to the new Doha International Airport. SITA’s Air Ground datalink service will be interfaced to the QCAA ATM automation system provided by Selex.

LEBANON

DGCA RENEWED SITA PRE-FANS D-ATIS SERVICES

DGCA Lebanon signed a renewal contract to extend the provision of the D-ATIS datalink service by SITA.

REGIONAL ATI MEETINGS AND CONFERENCES

SATFIT8 AND SAT18 MEETINGS

As part of its activities, SITA also actively participates in regional meetings from ICAO, and as such, attended the SAT FANS 1/A Interoperability Team (FIT)/8, the WACAF and the CNMC3 meetings in July 2013 in Dakar, Senegal. The SATFIT8 and SAT18 meetings were supported by ASECNA the regional ANSP of which Senegal is member state. The meeting was attended by 64 participants from twelve ICAO contracting states, namely: Angola, Brazil, Cape Verde, Ivory Coast, Ghana, Liberia, Mauritania, Morocco, Portugal, Senegal, South Africa, Spain and six International Organizations: ASECNA, ARINC, IATA, IFALPA, Roberts FIR and SITA. Various subjects were addressed, such as a review of ADS/CPDLC programmes and implementation activities in the South Atlantic (SAT) FIRs, plus performance monitoring and maintenance questions. SITA delivered a presentation from a datalink provider perspective on regional ATC operations.
ASIA – PACIFIC

SITA PARTICIPATES IN CANSO ASIA PACIFIC CONFERENCE, JAKARTA INDONESIA AND TOKYO DATA LINK FORUM

In an effort to continue pushing datalink implementation in the region and support Asia Pacific’s vision of a Seamless Sky, SITA participated and supported various conferences and forums such as the CANSO Asia Pacific Conference held in Jakarta, Indonesia May 6-8, 2013 and the Data Link Forum held in Tokyo on May 16, 2013. Information booths were set up to encourage interactions with visiting ANSP delegates and to share SITA’s vision as the preferred datalink and ATC systems partner. Delegates learned about SITA’s ATC innovation programs and involvement in Europe, especially the VHF partnership business models with ANSPs and datalink front-end processor solution.

AUSTRALIA
AIRSERVICES AUSTRALIA FANS DATALINK SERVICES

SITA’s commitment to supporting the region’s growing ATC datalink implementation is further highlighted by Airservices Australia’s agreement to continue using SITA FANS datalink service contract. Airservices Australia is responsible for providing air navigation services within the Australian Flight Information Region.

CHINA
HONG KONG CIVIL AVIATION DEPARTMENT PRE-FANS DATA LINK SERVICES

Hong Kong Civil Aviation Department awarded SITA the contract to supply a resilient and fully redundant IP-based network for Pre-FANS datalink services supporting its newly commissioned main and backup systems. Rigorous acceptance testing with the various sub-systems vendors have been completed and SITA’s Pre-FANS datalink service is ready for use.

INDONESIA
SITA ENABLES SEAMLESS DATALINK SERVICE FOR INDONESIAN AIRSPACE

Aircraft flying into Indonesian airspace will now enjoy enhanced air-to-ground datalink communication with SITA’s new FANS datalink system and service. Airline crew and controllers in the Jakarta FIR will use the new service to replace voice services by ADS/CPDLC. SITA successfully delivered a dual redundant ADS-CPDLC ground workstation, a datalink server and an ADS/CPDLC test system, capable of future upgrades to support CPDLC on ATN/VDL mode 2 technology to the newly created AirNav Indonesia. AirNav will manage two ATC centers, one Air Traffic Flow Management (ATFM) center and seven Terminal Areas (TMA) centers in the Indonesian Airspace.

REGIONAL
AIRCOM DATALINK SERVICES X.25 NETWORK MIGRATIONS TO XOT/IPVPN NETWORK

Several ANSPs have migrated, or are in the process of migrating, their FANS and Pre-FANS datalink services connections to SITA’s IP-based network. These included ANSPs from the Maldives, Indonesia, Singapore, Myanmar, Sri Lanka and Korea. With these migrations, all Asia Pacific ANSPs would have moved from the obsolete network by early 2014.

SITA SUPPORTS ICAO WORKING GROUP COMMON REGIONAL VIRTUAL PRIVATE NETWORK TASK FORCE

The first meeting of the Common Regional Virtual Private Network (VPN) (CRV TF/1) of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at ICAO APAC Regional Office in Bangkok, Thailand, 2-4 December 2013. The meeting was jointly hosted by Aeronautical Radio of Thailand Ltd. [AEROTHAI] and ICAO Regional Office Bangkok.

The meeting was attended by 33 participants from Australia, Bangladesh, Hong Kong, China, Denmark [PENS Service Steering Group Chairman], Fiji Islands, India, Japan, Malaysia, Myanmar, Singapore, Thailand and the USA. Industry participation included SITA.

SITA presented its PENS experience on service management gained in Europe. It was noted that under the guidance of PSSG (PENS Service Steering Group), the PENS Management Unit oversees the service provided by SITA. SITA’s service includes the daily operational management of PENS, including planning, monitoring the service and liaising with over 50 telecommunication operators and PENS users [CFMU, EAD and ANSPs].

SITA and CRV TF group in Bangkok. SITA attendees included: Philip Keh, Pratikkumar Shah and Mervyn Harris.
SITA was selected as datalink service provider in Brazil at the end of 2012, and since then it has been implementing an entire new VHF datalink network on behalf of Departamento de Controle do Espaço Aéreo – DECEA. The network infrastructure is being expanded to cover the entire Brazilian territory and will enable DECEA to develop and implement ATS air-ground datalink applications such as continental CPDLC through Brazil from 2016 (based on VDL Mode 2 ground stations).

In order to review the project progress, as well to exchange views and experience on the next generation of ATS services based on VDL Mode 2 technologies, SITA and DECEA held a very successful datalink workshop on April 30, 2013 in the Copacabana Arena Hotel in Rio de Janeiro, Brazil. The event was attended by 60 people from DECEA and represented the first step for discussions about the future of datalink in Brazil and the introduction of CPDLC in the continental areas as foreseen by the SIRIUS program that will modernize the Brazilian air navigation services.

DECEA and SITA staff attending DECEA Datalink Workshop in Rio de Janeiro, Brazil on April 13, 2013.

BRAZIL
EXPANSION OF DCL AND D-ATIS INTO 23 AIRPORTS FROM 2014

The introduction of D-ATIS and DCL services in the São Paulo and Rio International airports [along with D-VOLMET for all five Brazilian FIRs] demonstrated that airlines and ATCs seek more datalink communication to increase the efficiency and safety of daily operations.

The expansion of ATS datalink-based services to main Brazilian airports is one of the main initiatives contained in the DECEA SIRIUS program. From 2014, up to 23 airports will get these services from SITA, including airports at cities that will host World Cup games – such as Salvador, Manaus, Fortaleza, Natal, Porto Alegre, Brasília, Recife, Cuiabá, Curitiba or Belo Horizonte.

SITA was awarded a three year contract to provide engineering services to implement DCL and D-ATIS solutions and integrate control-tower-automated applications through the SITA ACARS processor system installed at DECEA premises in Rio de Janeiro.

The Kick-Off-Meeting of this project was successfully held on 28th January 2014 in DECEA premises, Rio De Janeiro.

SITA SUPPORTS DECEA TO DEVELOP A DEDICATED ATC DOMESTIC NETWORK

DECEA Brazil is committed to deploying the ICAO and EUROCONTROL defined and compliant infrastructure for a seamless, integrated data and voice communications network capable of enabling the transmission all operational air traffic management data across and between all relevant DECEA sites in Brazil.

DECEA have a committed program to upgrade its ATC communication infrastructure. Key management from DECEA attended the PENS symposium in Brussels and were impressed with SITAs capability in delivering a managed service. Inquiry was made on how SITA could help them achieve strategic goals related to network services.

As for offering further information to DECEA, SITA hosted a workshop in Rio on June 11, 2013 that was attended by key DECEA management and the PENS deputy Chairman, Detlef Schultz, presented the PENS experience from a user prospective.

URUGUAY
DEPLOYMENT OF ADS-C AND CPDLC SERVICES IN THE SOUTH ATLANTIC IN PARTNERSHIP WITH SITA

Dirección Nacional de Aviación Civil e Infraestructura Aeronáutica (DINACIA) Uruguay is the most recent organization to join the South Atlantic group of ANSPs that will provide ADS-C and CPDLC services to the airlines operating in the oceanic remote airspace.

SITA is very proud to be selected by DINACIA to offer its datalink expertise, solid air-ground satellite and VHF services and introduce ATS datalink based services to enhance the safety of flight monitoring and communication services on the Oceanic sector of FIR Montevideo.

By adding DINACIA Uruguay, along with Brazil, Argentina, Cape Verde, Canaries, Angola, Senegal, Ghana and South Africa, the SAT FANS Interoperability Team (FIT) has now consolidated one more step towards the implementation of FANS operations in the South Atlantic.
NORTH AMERICA

REGIONAL HIGHLIGHTS

NORTH ATLANTIC REGION

DATA LINK MANDATE

The North Atlantic (NAT) Region Data Link established a mandate requiring that aircraft operating in NAT airspace operate FANS Automatic Dependent Surveillance-Contract (ADS-C) and CPDLC. Most of the associated NAT ANSPs already have FANS-based ADS-C and/or CPDLC service. NAT ANSPs that do not currently support FANS-based ADS-C and/or CPDLC have plans to support it in the future. The first phase of the NAT Data Link Mandate commenced on February 7, 2013 and the second phase starts February 15, 2015. The North Atlantic Systems Planning Group meeting 49 (NAT SPG/49) concluded that phase two be implemented in three steps. These steps are outlined in the NAT SPG/49 meeting report. Additional information can be found in the ICAO NAT SPG North Atlantic Operations Bulletin 2012-13 issued November 30, 2012.

USA

FAA DATA COMM PROGRAM

FANS-BASED CPDLC

DEPARTURE CLEARANCE TRIALS

The FAA is supporting FANS-based CPDLC departure clearance trials at the Memphis and Newark international Airports with FedEx and United Airlines, respectively. Other airlines, including United Parcel Service, British Airways, Lufthansa Airlines, and Scandinavian Airlines are or will be supporting the trials at Memphis and/or Newark. Under an agreement with Harris, SITA is supporting these activities by providing access to participating aircraft that are using the SITA air-ground network as well as the associated airlines’ ground host system.

US PDC AND D-ATIS

DIRECT ACCESS

SITA is working with the FAA to implement what is necessary for direct access to the US PDC and D-ATIS. Access has previously not been possible due to technical limitations of the FAA Tower Data Link Services (TDLS) system that is the US PDC and D-ATIS source.

SITA ATS AIRCOM FANS

SERVICE PROVISION

SITA continues to provide ATS AIRCOM FANS services to the FAA Anchorage, New York, and Oakland Air Route Traffic Control Centers under the FAA Oceanic Data Link Telecommunications contract.

CANADA

NAV CANADA ATS DATA LINK

SERVICES EXPANSION

NAV CANADA has implemented Eurocae ED-85A Departure Clearance service at multiple Canadian airports. In addition, NAV CANADA has implemented domestic FANS CPDLC at multiple domestic ACCs.

SITA CFRS AND CADS

SERVICE PROVISION

NAV CANADA continues to use SITA ATS AIRCOM Centralized Flight Management Computer (FMC) Waypoint Reporting System (CFRS) and Centralized Automatic Dependent Surveillance System (CADS) services. The SITA CADS service facilitates FANS-1/A ADS position reporting.

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SITA AT A GLANCE

We are the world’s leading specialists in air transport communications and IT solutions.

We deliver and manage business solutions for airline, airport, GDS, government and other customers over the world’s most extensive network, which forms the communications backbone of the global air transport industry.

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