



1.1. Datos Personales

Nombre/s: **Marcelo Alejandro**

Apellido/s: **Oglietti**

Cantidad de hijos: **2**

Sexo: **Masculino**

Estado civil: **Casado**

Nacionalidad: **Argentina**

Condición de nacionalidad: **Nativo**

D.N.I.: **17319680**

C.U.I.T./C.U.I.L.: **20173196807**

País de nacimiento: **Argentina**

Provincia de nacimiento: **Córdoba**

Localidad de nacimiento: **Rio Cuarto**

Fecha de nacimiento: **29/07/1965**

1.2. DIRECCIÓN RESIDENCIAL

Calle: **Avellaneda**

Número: **428**

País de residencia: **Argentina**

Provincia de residencia: **Córdoba**

Localidad de residencia: **Alta Gracia**

Código postal: **X5186HDF**

Teléfono celular: **(0054) (03547) 58 0424**

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1.3. DIRECCIÓN LABORAL HABITUAL


Sede: **Centro Espacial Teófilo Tabanera**

Número de interno: **1056**

Número de legajo CONAE: **122**

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Lic. DEBORA MUÑOZ
UNIDAD DE SERVICIOS AL PERSONAL
COMISION NACIONAL DE
ACTIVIDADES ESPACIALES

Tomado conocimiento.
Unidad de Servicios del Personal



2. Formación


2.1. Título de Grado

TÍTULOS OBTENIDOS: **Licenciatura en Ciencias Físicas**

Duración nominal de la carrera: **5**

Fecha de finalización: **08/1992**

Institución: **Universidad de Buenos Aires**


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Verificado por Unidad de Servicios al Personal

2.2. Título de Postgrado

2.3. Doctorado

TÍTULOS OBTENIDOS: **Doctor en Ingeniería Informática**

Fecha de inicio: **09/2001**

Fecha de finalización: **03/2005**

Institución: **Universidad de Roma "La Sapienza"**

2.4. CURSOS DE ESPECIALIZACIÓN REALIZADOS

CURSOS: **Ocean Color**

Fecha de inicio: **02/2015**

Fecha finalización: **03/2015**

Institución: **Instituto Gulich + Space Missions GS & Ops Division, CONAE (Prof. B.Monger, Cornell University)**

CURSOS: **International Summer School on Artificial Intelligence Planning**

Fecha de inicio: **09/2002**

Fecha finalización: **09/2002**

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Institución: **International Conference On Artificial Intelligence Planning & Scheduling**

2.5. IDIOMAS

Ingles

Nivel alcanzado:

Lectura: **Avanzado**

Oral: **Avanzado**

Escrito: **Avanzado**

Italiano

Nivel alcanzado:

Lectura: **Avanzado**

Oral: **Avanzado**

Escrito: **Medio**

portuguez

Nivel alcanzado:

Lectura: **Avanzado**

Oral: **Medio**

Escrito: **Inicial**

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3. Tareas Científico-Tecnológicas relacionadas con el Plan Espacial Nacional realizadas desde mi ingreso a CONAE

Dominio I - Desarrollos Terrestres y Espaciales

Indicador 1. Sistemas terrestres y de comunicaciones de datos.

Feb 14 - Today SABIA-Mar System Engineering Team

* Member of the SABIA-Mar Mission System Engineering Team with main focus on the Ground Segment development and supporting the Operations development.

* Support the GS Development Team, particularly transferring the lessons learned during the SAC-B, SAC-A, SAC-C and SAC-D/Aquarius missions about Ground Segment Systems.

Particularly important for the future design of the SABIA-Mar Ground Segment was:

- the introduction of the "Operational Support Block" concept that allows to design and develop the Ground Segment system in tight coordination with the development of the Operations by linking each Operational Master Procedure in the Operations Design Concept with the subset of systems of the Control Center and Mission Center that are needed to support the execution of that procedure;

- the introduction of the requirement of having memory-less Operational Support Blocks together with a central repository from which each Operational Support Block retrieves the information needed for its execution and store the resulting products and logs when its execution finishes;

- the introduction of the requirement for using the Operational Support Blocks systems only when needed (i.e. the rest of the time those systems will be off releasing valuable resources) together with a central planning and execution monitor system to launch and then monitor the execution of these systems as needed.

* Support the Operations Development Team, particularly transferring the lessons learned during the SAC-D/ Aquarius mission.

Particularly important for the future design of the SABIA-Mar Ground Segment was:

- the very early introduction of the Operational Master Procedures to organize the Operations Design Concept development making easier the analysis of the consistency of the overall Operation Design Concept and of the resources used;

- to use the Operational Master Procedures to develop the Operations Design Concept in tight coordination with the development of the Ground Segment.

* To test the docker technology that will be used in the context of the SABIA-Mar Control Center and Mission Center for the first time, together with the virtualization technology that was already successfully used in the SAC-D/ Aquarius and that we are planning to keep using as needed.

Nov 11 – Jun 14 SAOCOM Mission Ground Segment and Operations Development Manager



* Management of the development effort of the Ground Segment and Operations for CONAE's SAOCOM Mission, a two satellite constellation L-Band SAR mission with several applications over the pampa region (e.g. soil moisture maps).

* Including to organize, train and lead the two teams that developed the Ground Segment and Operations for the SAOCOM Mission that successfully passed their respective GS and ILSOPS components CDRs on July 2013 as well as the Mission CDR on November 2013.

Feb 06 - Aug 07 Ground Segment Project Manager and Computer Science Researcher at CONAE for the:

CONAE Ground Station Services (CGSS) Upgrade for SIASGE project:

* Project Manager for the project that upgraded CONAE's Córdoba Ground Station in order to operate it in agreement with the Requirements and the Statement Of Work with the COSMO-SkyMed four satellites Mission for the Telemetry, Tracking and Command, and SAR data downloading Ground Station services.

* To define the ground station architecture and interfaces that allow an expandable monitor, control and automated system, including the creation of the XPNet Monitor and Control Protocol and to lead the develop of the XPNet drivers to monitor and control all Antenna, RF, TM & TC Processing Nodes and Data Acquisition equipment that do not come with this protocol.

* To add a web-services based XPNet protocol to the Mission-Independent Multi-Mission Monitor Control and Acquisition System [see Section I.2] expanding its capacity to monitor and control equipment based on the referred protocol. This new capacity was used to implement the automatic monitor and control logic of the Link Management Protocol for the COSMO-SkyMed Mission on the Córdoba Ground Station;

* To support the local providers that develop equipment including the native XPNet protocol (e.g. DTA's RF HW).

* This project organized most of Córdoba Ground Station under this new monitor and control system allowing to unify the planning and operation of the antennas, the RF chains, RF matrix, TM and TC Processing Nodes and Data Acquisition HW under a single multi-mission multi-sensor service in an automatic manner, covering all the equipment needed for the COSMO-SkyMed mission, and leaving open interfaces for any future expansion;

* Manage the implementation of two antenna and a control and acquisition system for NOAA "end-of-life"-GEO satellites (satellites that do not really keep the GEO orbit but have some movement around the nominal GEO position that it is necessary to follow for having a proper data acquisition).

* Lead the effort to organize an integrated Document Management System for the Ground Segment Development Engineering team operative from Feb 2007.

Nov 11 - Jan 12 Virtualization and re-location of the SAC-C MOC Manager

* Manage the effort for the virtualization of the SAC-C MOC and re-location of it outside the area reserved for the Córdoba Ground Station

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Indicador 2. Sistemas espaciales.

Sep 01 - Feb 06 Senior Space Software Engineer and Computer Science Researcher for the CASMOP R&D Project, joint effort between PST-ISTC/CNR and CONAE:

- * Main liaison in Computer-Aid Space Mission Operations Planning (CASMOP) project between the research Planning and Scheduling Team at the ISTC of the CNR, Italy's National Research Council, and CONAE. CASMOP main objective was to participate in the development of systems for planning space mission operations using Artificial Intelligence Planning domain-independent techniques to acquire the necessary know-how and experience in order to acquire this capacity to apply it in future CONAE space missions by leading the development of automated planning tools and train personnel at CONAE as was done for the SAC-D/Aquarius Mission, and by supporting the development of this planner tools for the SAOCOM Mission (until Jun 2014) and for the SABIA-Mar mission (until today)

Jan 97 - Aug 01 Senior Space Software Engineer and Computer Science Researcher for the SAC-C Satellite Project, joint effort between NASA and CONAE (Launched Nov. 21th, 2000):

- * Designed SAC-C's Ground Segment and the Mission Operations Center (MOC).
- * Main responsible for the integration of SAC-C's MOC in Córdoba.
- * Main responsible for the integration of NASA's Integrated Services Network of Ground Stations, of the Brazilian Alcantara Ground Station and of Córdoba Ground Station with the SAC-C's MOC (including defining the protocols that were used for implementing this interfaces);
- * Integrated and maintained the Monitor, Control and Acquisition Ground Support Equipment for SAC-C during Integration and Test (Argentina and Brazil) and the Launch Campaign (USA).
- * Trained and supported the Flight Operations Team and Integration and Test operators about the GS Systems.
- * Developed the interfaces of SAC-C's MOC with NASA's NISN and with the Brazilian Space Agency's Alcantara Station. This allowed to monitor and control SAC-C from its MOC at Córdoba through many stations over the world in Argentina, USA, Antarctica, Alaska, Norway and Brasil. Also used for SAC-D/Aquarius Mission, adding, in this case, two additional Ground Stations at Matera & Malindi.

Jan 97 - Aug 01 Senior Space Software Engineer and Computer Science Researcher for the Mission-Independent Multi-Mission Monitor, Control and Acquisition System (CAS) Project:

- * Designed the Mission-Independent Multi-Mission Monitor (MI-MM) CAS, led and organized it's development.
- * Developed the kernel (~40%) of the MI-MM CAS and several of their components (C++ Builder under Windows NT).
- * This system include the software that implements in ground the interface between the FS and GS including the reception, decoding and visualization of the spacecraft TM and the encoding and transport of the TCs, including an efficient close loop protocol uplink channel

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manager;

* The CAS system was the core part of the MOC for a series of satellite missions: SAC-C and SAC-D/Aquarius (CONAE/ NASA); will be used for the SAOCOM-1A/B satellites (CONAE); and the SABIA-Mar (CONAE / AEB Brazilian Space Agency) .

* This system is designed to automate the testing of the Spacecraft during Integration & Test including the control of all the Spacecraft EGSE equipment through its expandable Monitor & Control PNet Protocol, using the same monitor and control tools that can be later used for the actual flight control of the spacecraft at the Mission Operations Center.

* This system was initially chosen to implement the MOC of the CESAR satellite mission (a joint project by CONAE and INTA, the Spanish Space Agency, later abandoned). In this context, this system was analyzed both in price and quality, and selected as the most convenient by an independent space consultant Spanish firm contracted by INTA, against several international alternatives: Ball Aerospace's Minisat01, L3Com's STORM, Integral Systems' Epoch 2000 and Exigent International's ICC used by the Iridium and GPS constellations).

* Designed the Spacecraft Control, Telemetry Specification and Operations Languages (including writing in collaboration their user guide and reference docs). These languages permit non-programmers to write their pass plans and test procedures, define the satellite TM physical and logical variables and alarms, and it's TC dictionary. Train CONAE and main contractor personnel about its use.

* The system kernel included a set of specific compilers and interpreters developed for these custom domain languages that were included in many system tools. All the test procedures, contingency actions, recovery actions, pass plans, basic commands and telemetry specification scripts were written in these languages and were run (after interpreted/compiled) by the various system components.

Jan 97 - Dec 98 Space Software Engineer at CONAE for the SAC-A real time control and monitor center project:

* Developed (~50%) of SAC-A real time control and monitor center used for commanding, telemetry decode and memory dump acquisition (programmed in C++ and Assembler under MS-DOS; this includes low-level programming of hardware made in CONAE as well as COTS like irig-b boards). This Ground Support Equipment was used for Monitor, Control and Acquisition during the Integration, Tests, Launch Campaign and Flight Operations of SAC-A satellites.

Feb 94 - Dec 96 Space Software Engineer at CONAE for the SAC-B real time control and monitor center project:

* Developed (~50%) of SAC-B real time control and monitor center (a.k.a Checkout Station) used for commanding, telemetry decode and memory dump acquisition (programmed in C++ and Assembler under MS-DOS; this includes low-level programming of hardware made in CONAE as well as COTS like irig-b boards). This Ground Support Equipment was used for Monitor, Control and Acquisition during the Integration, Tests, Launch Campaign and Flight Operations of SAC-B satellite.

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Indicador 6. Software de tiempo real.

Jan 96 - Dec 96 Space Software Engineer at CONAE for the

SAC-B data real time tagging system project:

- * Developed (100%) a calibration system for the SAC-B on-board time by means of tagging the telemetry ingested by the acquisition system with Irig-B format time obtained from a GPS. This was incorporated in the real time control and monitor center.

Additionally, the entries in Section I.2 "Jan 97-Dec 98, Space Software Engineer at CONAE for the SAC-A Real Time Control & Monitor Center" and "Feb 94-Dec 96, Space Software Engineer at CONAE for the SAC-B Real Time Control & Monitor Center" are also valid for this section (I.6) because they include development of Real Time Software.

Indicador 7. Control de misiones satelitales.

Aug 16 - Jun 17 SAC-D/Aquarius Mission Operations Manager (without a team):

- * Execution of the last part of the SAC-D/Aquarius Mission Joint Closeout Activity Plan until its completion on March 2017, mainly to prepare the contents for the mission final repository (e.g. to gather, organize, delete repetitions, check file corruption), to define the repository operational requirement, to transfer its contents to the repository administrators and verify the repository contents and supports its commissioning.

- * As part of the above effort, it was necessary to temporarily preserve all the data (critical to the success of the completion of the Joint Closeout Activity Plan) and prepare all the SAC-D/Aquarius Mission Operations Center hardware, including the complete deletion of their data, before the disintegration and transfer of all this hardware (servers, computers, think-clients, monitors, switches, firewalls) to the SAOCOM Mission personnel.

- * Lead the data destruction effort needed in order to fulfill the NASA-CONAE Collision Avoidance Non-Disclose Agreement.

- * To represent CONAE in the "Final Aquarius Instrument Review" and to present a summary about the SAC-D Instrument and Observatory performance.

- * Additionally, it was necessary to prepare the contents of a repository with all the software developed in the context of the GS and Mission Ops. teams during the SAC-C, SAC-B, SAC-A and SAC-D/Aquarius Missions, and to transfer this content to the area designated to host this repository the CONAE's DB and Communications Unit. The contents include the source code of the referred SW, the installers and all virtual machines with the development environment needed to generate the executable programs and installers from the corresponding source code.

May 12 - Sep 12 Transference of SAC-C MOC Operations Management.



* from INVAP to a new dev. ops. team.

Jun 11 - Aug 16 SAC-D/Aquarius Mission Operations Manager (leading a team)

* From launch, Jun 10th, 2011, Mission Operation Manager of the joint NASA CONAE SAC-D/Aquarius Mission, including.

* Be the maximum responsible for the Satellite operations after the Post Launch Assessment Review PLAR-1 (Nov 2011) and for the SAC-D Instruments after PLAR-2 (Nov 2012), until the end of the mission.

* Lead the NASA-CONAE joint Flight Operations Teams, together with NASA's Aquarius Project Manager, until the end of the mission life and during the execution of the first part of the NASA-CONAE SAC-D/Aquarius Mission Joint Closeout Activity Plan until August 2016 (when the team was assigned to other tasks).

Mar 10 - Jun 11 SAC-D/Aquarius Mission Operations Development Manager

* Management of the development of the operations for the joint NASA CONAE's SAC-D/Aquarius Mission operations, as part of the mission development effort.

* Lead CONAE Flight Operations Team during the development of the Mission Operations, for the NASA's Aquarius Project Manager and CONAE's SAC-D Mission Project Manager, until the final assessment of the operations at the Mission Post Launch Assessment Reviews.

Jan 09 - May 09 Córdoba Ground Station Operation Development and Operations Transfer Manager

* Management of the development of the operations for the whole Córdoba Ground Station, including the definition of the Ground Station operations plan, all its operations processes and step-by-step procedures, contingency and maintenance procedures.

* Management of the transfer of the operations activity and responsibility from a contractor (INVAP ground station ops team) to the new team.

* Lead the training effort of the new ground station operations team.

Jan 97 - Dec 98 Space Software Engineer at CONAE for the

SAC-A Satellite Project, joint effort between NASA and CONAE:
(launched by NASA space shuttle STS-88 Dec. 13th, 1998)

* Flight Operations conductor for the Launch and Early Orbits Flight Operations of SAC-A satellite at the real time control and monitor center at the Italian National Space Agency base in Trapani, Sicily. Integration of that partial real time Flight Operations and Control Center.

* Supported the integration of SAC-A's MOCC, in Falda del Carmen, Argentina.

* Supported and trained the SAC-A FOT during the entire life of the mission.

* Execution of functional tests of SAC-A during the thermal vacuum cycling (Nov/Dec 1997, NASA Goddard Space Flight Center, Maryland, USA).

AKB Feb 94 - Dec 96 Space Software Engineer at CONAE for the



SAC-B Satellite Project, joint effort between NASA and CONAE (launched Nov. 4th, 1996):

- * Integration, Verification and Validation of the SAC-B Mission Operations Control Center (MOCC) at San Miguel, Prov. de Buenos Aires. Definition, development and validation of the SAC-B MOCC operations, including participation in the writing of the Flight Operations documentation.

- * Led and organize Flight Operations. Develop and led the Flight Operations at the Mission Operations Control Center (MOCC) for the Early Orbits Flight Operations of SAC-B satellite in San Miguel, Argentina, (launched by OSC's Pegasus from NASA's Wallops Flight Facilities (WFF) in November 4th 1996). SAC-B was a joint project of NASA and CONAE. Including, to write and specify the Flight Operations manuals and to train the Flight Operations Team.

- * Developed the satellite's Products Pre-Processing and Distribution System.

- * Support for the Payload and Subsystem teams during all the I&T and Launch Campaign phases.

- * Participation in SAC-B and Deep Space Network compatibility test in NASA's WFF. Main responsible in SAC-B and Pegasus software interfaces compatibility test also in WFF.

- * Software responsible for the acceptance tests of the Scientific Atlanta's Telemetry, Tracking and Control Ground Station, in Atlanta, USA (rejected).

- * Participation in the installation, maintenance and operations of this ground station in San Miguel, Argentina.

Dominio II - Explotación de los datos y agregado de valor.

Indicador 3. Generación de productos de valor agregado y su diseminación.

Aug 07 - Aug 08 Reorganization of the DISPA accordingly to the guidelines of CONAE Internal Audit Unit

- * Develop a new software system for the GPAF to manage the administration process previously run inside the DISPA Unit;

- * Develop a new software system for the DISPA unit interfaced with the GPAF's administration system to manage the operation of CONAE DISPA Unit;

- * Develop the operations procedures for both GPAF and DISPA unit personnel, and training of their respective unit personnel about the use of the new system;

- * Integration and test of the new systems in both the GPAF and DISPA Units;

- * Migration of all previous space information CONAE's clients status and balances to the new system;

- * Support of CONAE Internal Audit Unit activities by a detail analysis of all CONAE's client status and balances generating reports used by this Unit and GPAF.

Dominio II - Desarrollo de los recursos humanos.

Indicador 4. Formación y transferencia de conocimientos especializados al personal de

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CONAE.

Jun 11 - Sep 16 CONAE's Space Missions Ground Segment and Operations Lessons Learned Team Coordination

* Lead the effort to gather input for lessons learned from the personnel participating in the SAC-D/Aquarius Mission (both from CONAE and its main contractors like INVAP and Ascentio) as well as from the NASA (GSFC and JPL) , the Italian Space Agency (ASI) and CNES teams participating in the project.

* Write the "SAC-D/Aquarius Mission Lessons Learned for the SAOCOM Mission"(Jan 2012) in collaboration with A.Ganopol, and to present it to the SAOCOM Mission Project Manager and System Engineer.

* Lead the effort to define a continuous improvement process to be applied during operations for present and future CONAE Space Missions, to execute and validate this process for the SAC-D/Aquarius Mission: a formal process to manage the lessons learned and actively use them through the whole set of operational activities to improve the mission operations assurance and performance, including the management of the opportunities to improvement and the management of the issues and anomalies (see publication: A.Ganopol et al, 2017).

* To contribute to the writing and classification of the SAC-D/Aquarius lessons learned, to lead and review the process, and together with SAC-D/Aquarius Project Manager, to select, write and present, to a wider audience, the Top Lessons Learned of the Mission, including the presentation given during the "Final Aquarius Instrument Review" on Sep 2016.

* To build a public repository available for a wider audience (beyond the scope of the SAC-D/Aquarius operations) sharing all lessons learned during the SAC-D/Aquarius Mission operations together with the technical information critical to the detailed understanding of these lessons. This repository was shared with several Argentine organizations developing space missions (e.g. Arsat, INVAP and Ascentio), inside CONAE with the teams working on future missions (e.g. SAOCOM and SABIA-Mar) and with NASA. Also, these organizations were invited to participate during the SAC-D/Aquarius Mission Nominal Operations Review 1 and 2, to discuss about the mission main anomalies and lessons learned.

Feb 06 - Aug 16 CONAE's Space Missions Ground Segment and Operations Personnel Training Coordination

* Lead the effort to train the personnel of CONAE and its main contractors for the Space Mission Ground Segment systems and Mission Operation Center Systems (for the development, integration, launch and maintenance of the Satellite Mission Control Software and software that implement the Ground Segment interfaces). The personnel trained hands-on during these years contributed to several CONAE space missions developed/operated during the referred period, SAC-C and SAC-D/Aquarius, for the Córdoba Ground Station (ETC) services, and for the development of the launcher and the SAOCOM ground segment systems.

* Lead the effort to train the personnel of CONAE and its main contractors for Space Mission Operations (both for the development of the operations and its nominal operation phase). The

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personnel trained hands-on during these years contributed to the operations of SAC-C and SAC-D/Aquarius Missions, to the operations of the Córdoba Ground Station (ETC) services, to the development of the operations for the SAOCOM ground segment systems, and to the formal training given to the students of three different master degrees at the Gulich Institute.

* Lead the effort to train some personnel of CONAE and its main contractors about Automated Planning for Space Mission (both about algorithms, models, and tools). The personnel trained hands-on during these years contributed to the development of the automated planning tools used inside the SAC-D/Aquarius Mission Operations Center, to the development of the planning tool that will be used for the SAOCOM Mission, and to the formal training in automated planning given to the students in the Early Warning and Response to Emergencies Space Applications master degree at the Gulich Institute.

Indicador 5. Formación y transferencia de conocimientos especializados al personal y autoridades de otros organismos.

The text in Section II.4 is also valid for this Section (II.5).

In both efforts, CONAE's Space Missions Ground Segment and Operations Lessons Learned Team and CONAE's Space Missions Ground Segment and Operations Personnel Training, there were personnel both of CONAE and Veng as well as of some of CONAE's main contractors (e.g. INVAP and Ascentio).

In particular, with respect to the Lessons Learned Team activity, there was participation of other space agencies, like NASA's GSFC/JPL and ASI, and of other Argentine organizations (e.g. Arsat and Ascentio) with interest in Space Missions development and operations.

Dominio III - Relación y cooperación internacional.

Indicador 1. Cooperación con otras agencias espaciales y otros países.

The texts in Section I.2, I.7, II.4, IV.1 and III.2 are also valid for this Section (III.1).

The task described in [I.2], "Sep 01 - Feb 06, Senior Space Software Engineer and Computer Science Researcher at CONAE for the CASMOP R&D Project, joint effort between PST-ISTC/CNR and CONAE" was an international cooperation between the Italian Research Institute on Cognitive Science and Technology (ISTC) of the Italian National Research Council (CNR) and CONAE.

The task described in [I.7] were all in the framework of the development of joint Space Missions with NASA. Particularly, the role as the SAC-D/Aquarius Mission Operations Manager applies to this section (see tasks in I.7: Aug 16 - Jun 17, Jun 11 - Aug 16, and Mar 10 - Jun 11).

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The task described in [II.4] Jun 11 - Sep 16 CONAE's Space Missions Ground Segment and Operations Lessons Learned Team Coordination, was mainly an international cooperation with NASA, but several international and national organizations were involved.

The task described in [IV.1] Sep 07 – Ago 10, Head of CONAE's Institutional Relations Department" involved to be responsible for host several visits of delegations from international Space Agencies, both from the region (e.g. Peru) and farther away (e.g. China and Russia) at CONAE, several times at the Teófilo Tabaneras Space Center, as well as non technical delegations (e.g. the USA ambassador at the CETT).

Finally, also the Task [III.2] Dec 07 – Ago 10 Head of Instituto de Altos Estudios Espaciales "Mario Gulich" involved similar responsibilities/activities.

Indicador 2. Intercambio de know how y formación de recursos humanos.

Dec 07 – Mar 14 Researcher and Teaching professor at Instituto de Altos Estudios Espaciales "Mario Gulich"

* Researcher and teaching professor on Automatic Planning & Scheduling for Space and on Introduction to Automated Planning (focused on research on automated planning of joint space mission operations by means of extended preferences, automatic generation of mission plan and their execution monitoring) and postgraduate teaching on Space Science and Technology.

Dec 07 – Ago 10 Head of Instituto de Altos Estudios Espaciales "Mario Gulich"

* This Institute is an inter-institutional initiative between CONAE and the National University of Córdoba (UNC) with focus on research activities and postgraduate teaching on Space Science Applications and Space Engineering Development.

* Lead the effort in CONAE for the development and initial execution of the Institute Gulich's first joint master degree between the Gulich Institute and the Physics Astronomy and Mathematics Faculty (FAMAF) of the Universidad Nacional de Córdoba, focused on space applications namely, the Master in "Emergency Early Warning and Response Space Applications", from both academic matters to purely organizational matters at the Institute like for example re-structuring the building functions and executing a minor expansion of it in order to allocate the new students, developing the plans for a greater expansion of the building needed to allocate the all the envisaged masters degrees, and including the liason function between CONAE and the Italian Space Agency for organizing the half-an-year stage at italian research institutions for the students that was a necessary part of the master degree.

* Collaborate with several researches at the Institute, including with teams researching in the field of panoramic epidemiology and emergencies, to help their teams present the systems proposed in their research by partially following the space engineering international standards.

* In parallel, to continue to research and teach in the field of Automatic Planning for Space Mission (see specific entry: Dec 07-Mar 14 "Researcher and Teaching professor at Institute

MLG



Gulich")

Indicador 3. Complementariedad con otras misiones espaciales. Misiones conjuntas.

The texts in Section I.7 and II.4 are also valid for this Section (III.3).

The tasks described in [I.7] were all in the framework of the development of joint Space Missions with NASA. Particularly, the role as the SAC-D/Aquarius Mission Operations Manager applies to this section (see tasks in I.7: Aug 16 - Jun 17, Jun 11 - Aug 16, and Mar 10 - Jun 11).

The task described in [II.4] Jun 11 - Sep 16 CONAE's Space Missions Ground Segment and Operations Lessons Learned Team Coordination, was mainly an international cooperation with NASA, but several international and national organizations were involved.

Dominio IV - Dirección y supervisión de tareas científico-tecnológicas.

Indicador 1. Gestión y dirección de tareas científico-tecnológicas dentro del Plan Espacial Nacional.

Jul 13 - Aug 16 CONAE's Space Missions Ground Segment and Operations Division Manager

* Management of CONAE's Space Missions Ground Segment and Operations Division in charge of developing the ground segment and the operations for all CONAE's Space Mission (including defining and requesting/contracting all needed Integrated Logistic Support), of running the Mission Operations Center and Orbital Dynamic Center for all flying CONAE's Space Mission.

* Management of the operations of the SAC-D/Aquarius Mission Ground Segment and Mission Operations Center.

* Management of the development of the Ground Segment for the SAOCOM Mission until its CDR (including its mission operations center, user segment and its orbital dynamics services, and its integrated logistics support) and of the Mission Integrated Logistic Support and Operations, also, until the Mission CDR.

* Management of the initial development of the Ground Segment and Mission Operations, for the SABIA-mar Mission.

Apr 11 - Jul 13 CONAE's Missions Operations Center Unit Manager

* Management of CONAE's Space Missions Operations Center Unit provides common

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operations services to the Mission Operations Centers and the Ground Segment of the SAC-C and SAC-D/Aquarius Missions.

* Additionally, to support the development of the launcher ground segment with advice about the launcher telemetry processing (particularly about how to use the CAS's TlmyViewer/Decoder for processing, decode and visualize the the launcher telemetry).

Sep 07 – Ago 10 Head of CONAE's Institutional Relations Department,
(NOTE: At CONAE, this Department included all CONAE's operative and development

ground segment services plus all usual Institutional Relations functions)

* Lead the organization of this service in four main operational areas: the Ground Station Services, the User Ground Segment Services, the Mission Operation Center Services, and the Orbit Dynamic Services; plus a Ground Segment and Application Engineering unit in charge of executing all new development projects for CONAE's Ground Segment. It also includes an application consulting unit, an educational unit, an a national agreements unit, and a press office.

* Lead the initial effort to organize an integrated logistic support for the Teófilo Tabaneras Space Center (CETT), particularly including: a) the initial development of the CETT's health and safety services, b) the development of a security development plan for the whole CETT; c) the organization of a CETT's networking services separated from all other CETT's teams; d) the re-organization of the CETT's waste management, including the de-activation of a in situ open dump area; and e) the development of an initial health and safety plan for the CETT's cafeteria.

* Lead the effort to organize an operations team for the Ground Station Services , defining all the processes and procedures for this activity, together with defining and executing a transition plan from the previous main contractor for the Ground Station operation.

* Lead the effort to organize an operations team fro the SAC-C Mission Operations Control Center, defining all the processes and procedures for this activity, together with defining and executing a transition plan from the previous main contractor for the Ground Station operation.

* Lead the effort to organize an integrated Document Management System --in place from 2007-- for the whole of CONAE's Ground Segment four services, the application consulting unit, the educational unit, the national agreements unit, and the press office.

* Lead the effort for a successful technical feasibility test for the antenna, RF and acquisition equipment for downloading at Córdoba Ground Station EROS-B high resolution images and to write the draft for an agreement for the downloading of these images at Córdoba.

* Support the development local providers for space ground segment systems, including for mission center systems, ground station systems, image processing systems and RF communications equipment; and for space mission operations, including for both operations of ground segment facilities and of spacecrafts.

* Organize meetings with various governmental agencies in order to support them until they were able to establish/improve a cooperation agreement with CONAE for the use of space information in their daily activities (e.g. ARBA and Catastro de la Prov. de Córdoba)

* Organize meetings or support meetings organized by CONAE's Secretaría General, with

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representatives of international Space Agencies visiting CONAE facilities, both technical (e.g. with Russia and China delegations) and non-technical visits (e.g. the USA ambassador at the CETT).

* Develop some formal agreements with the Fundación de la Universidad Nacional de Rio Cuarto (FUNARC) for the development of various ground systems for the SAC-D/Aquarius Ground Segment. To support CONAE's Technical Representative and SAC-D Ground Segment System Engineer during the execution of this agreement until its partial termination.


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4. Publicaciones científico-tecnológicas

4.1. Publicaciones en revistas o libros

Refereed Journal Articles

* Abigail Ganopol, Marcelo Oglietti, Anibal Ambrosino, Fred Patt, Alicia Scott and Liang Hong. Lessons Learned: An Effective Approach to Avoid Repeating the Same Old Mistakes, DATA Journal of Aerospace Information Systems 14(9):1-10, August 2017.
(DOI 10.2514/1.1010485)

* M. Oglietti. Understanding Planning with Incomplete Information and Sensing, Artificial Intelligence, Elsevier, 164, 1-2, 171-208, 2005.

4.2. Presentaciones, conferencias

International Conference / Workshop Papers

* Estefanía De Elía, Marcelo Oglietti, Sergio Masuelli and Eduardo Romero. Planning of Satellite Images Applied to Early Warning Hydrological Models, In Proc. of the 8th International Workshop on Planning and Scheduling for Space (IWPSS-13), NASA Ames Research Center, Moffett Field, California, on March 25-26, 2013.

* Eduardo Romero, Marcelo Oglietti, and Estefanía De Elía. SAC-D/Aquarius Mission Automated Plan Generation and Execution Validation, In Proc. of the 8th International Workshop on Planning and Scheduling for Space (IWPSS-13), NASA Ames Research Center, Moffett Field, California, on March 25-26, 2013.

* E. Romero, M. A. Oglietti. Space Operations as a Guide for a Real-World Scheduling Competition, Scheduling a Scheduling Competition Workshop (ICAPS-07), Providence, Rhode Island, USA, Sept. 2007.

* M. Oglietti and A. Cesta. CSTRIPS: Towards Explicit Concurrent Planning, in Proceedings of the 3rd Italian Workshop on Planning and Scheduling, AI*IA Symposium, Perugia, Italy, Sept. 2004.

International Conference / Workshop Posters Papers:

* E. Romero, M. A. Oglietti. Cooperative Space Mission Operation Planning by Extended Preferences, In Proc. of the 6th International Workshop on Planning and Scheduling for Space (IWPSS-09), Pasadena, California, USA, July 2009.

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* M. Oglietti. Domain independent planning for space: Building a bridge from both shores, 5th International Workshop on Planning and Scheduling for Space (IW PSS-06), Baltimore, MD. USA, Oct. 2006.

Technical Conference/Workshop Organization/Committee:

Jul 26-27th, 2015 International Workshop on Planning and Scheduling for Space
at the International Joint Conference on Artificial Intelligence,
Organizer/Program Committee Co-chair.

Jul 28-31th, 2013 International Joint Conference on Artificial Intelligence (IJCAI-2013),
Beijing, China (remote),
Reviewer.

Jun 8th-10th, 2011 International Workshop on Planning and Scheduling for Space,
Darmstadt, Germany (remote),
Program Committee.

Oct 22-25th, 2006 International Workshop on Planning and Scheduling for Space,
Baltimore, USA.
Program Committee.

Jun 6th-10th, 2005 International Conference on Automated Planning and Scheduling,
Monterrey, California, USA.
Reviewer.

Jun 8th-10th, 2004 International Workshop on Planning and Scheduling for Space,
Darmstadt, Germany.
Reviewer.

Jul 28-31th, 2003 International Conference on Automated Planning and Scheduling,
Trento, Italy.
Reviewer.

4.3. Publicaciones internas de CONAE (documentos de proyectos, informes, otros)

>> CONAE Software Artifacts:

MO Follows a selection of Software Artifacts developed for CONAE Space Missions:



- * M.Pacher-M.Oglietti, SAC-B Checkout, Nov 1996.
- * M.Pacher-M.Oglietti, SAC-A Checkout, Nov 1998.
- * M.Pacher-M.Oglietti, Control and Acquisition System (CAS) Software:
SInter, SInterCL, TlmyDecoder, PNetRouter, PNetRouterMonitor,
PNetTest, LogbookSrv, LogbookClit, Broadcaster, BroadcasterMng, CASDBMng,
TimeClit, SCSimulator, PTPBridge, PTPSimulator, TlmyRecMng, BaseLib, TimeSrv,
CtrlConsLib, SCCELib, IOLib, BaseLib, LogbookLib, MathLib, PassPlanCheckLib,
TlmyLib, TlmyManager, OCLKernel, OCLTypes, Exceptions and Bookmarks, Sep 2000.
- * M.Oglietti-M.Jauregui, CAS Software: SCLCheck, Sep 2000.
- * C.Falcon-M.Pacher-M.Oglietti, CAS Software:TlmyViewer, Oct 2000.

>> CONAE Internal Technical Documents:

Follows a selection of Internal Technical Documents written for some of CONAE Space Missions/Projects:

* SAC-B Mission:

- M.Pacher-M.Oglietti, Checkout Station, Oct 1994
- M.Pacher-M.Oglietti, Manual del Usuario del Software de la Estación de Checkout, May 1995
- C.Falcon-M.Pacher-M.Oglietti, Real Time Network, Mar 1995
- C.Falcon-M.Pacher-M.Oglietti, SAC-B Products Reference, Jun 1996
- M.Oglietti-M.Jauregui, SM MOCC Manual de Operaciones del SAC-B, Oct 1996

* SAC-A Mission:

- Pacher-M.Oglietti, Manual del Usuario del Software de la Checkout del SAC-A, Oct 1997.
- M.Jauregui-P.Anigstein-M.Oglietti, Procedimiento de Operación para las Primeras Orbitas en las Estaciones de apoyo: Wallops y Trapani, Dec 1998

* SAC-C Mission:

- M.Pacher-M.Oglietti-C.Falcon, SAC-C CAS Design, May 1996
- P.Anigstein-M.Oglietti, SAC-C CAS SCCE User Guide, Jun 1996.
- M.Oglietti-C.Falcon-M.Pacher, SAC-C CAS Requirements, Jun 1996.
- M.Oglietti, SAC-C CAS Project Design Concept, Feb 1996.

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M.Pacher-M.Oglietti-C.Falcon, SAC-C CAS Protocolo de comunicaciones con los GSEs, May 1996.
C.Falcon-M.Oglietti-M.Pacher, SAC-C CAS Telemetry User Guide, Jun 1996.
C.Falcon-M.Pacher-M.Oglietti, SAC-C CAS Project, May 1996.
M.Pacher-M.Oglietti-C.Falcon, SAC-C Protocolo de la Red de Processos Controlables del CAS
(PNet Protocol), May 1996
M.Oglietti-M.Pacher, CAS OCL User's Guide, Dec 1997
M.Oglietti-M.Pacher-C.Falcon, SAC-C Ground Segment Guide For Payload And Subsystem Users, Apr 1999.
M.Oglietti-M.Pacher, CAS SCL User's Guide, Apr 1999.
M.Oglietti-M.Pacher, CAS SCL Reference Manual, Apr 1999.
M.Oglietti-M.Pacher, CAS Scripts Security And Maintenance Manual, Apr 1999.
M.Oglietti, CAS and NISN Interface Specification, Apr 1999.
M.Oglietti, SAC-C Products, Jul 1999.
M.Pacher-M.Oglietti-C.Falcon, SAC-C CAS Keep Alive Messages, Sep 2000.
M.Oglietti-M.Pacher, Informe sobre incidentes de operación de la misión SAC-C hasta el 3/Marzo/2001, Mar 2001.
M.Oglietti-CFilici, Breve descripción del Sistema de Adquisición y Control CAS y del Sistema de visualización, calculo y propagación de órbitas, Jul 2005

Some contributions to the mission reviews:

@ SAC-C Mission Critical Design Review:

M.Oglietti-C.Falcon-M.Pacher, SAC-C Control and Acquisition System (CAS) PDR Presentation, Jul 1996.

M.Oglietti-M.Pacher, SAC-C CAS Ground Segment CDR Presentation, Oct 1997.

@ SAC-C Mission Operations Review:

M.Oglietti-M.Pacher, SAC-C CAS Mission Operations Review Presentation, Nov 1998.

@ SAC-C Flight Operations Review:

M.Oglietti-M.Pacher, SAC-C CAS Flight Operations Review Presentation, May 2000.

* CONAE Ground Station Upgrade Project (for ASI's COSMO-SkyMed Mission, part of ASI & CONAE joint Mission SIASGE, Sistema Italo Argentino de Satélites para la Gestion de Emergencias):

M.Oglietti-M.Pacher, XPNet Protocol, May 2006.

M.Oglietti-F.Pacha-G.Zamboni-J.Monsu-CGSSStaff, CGSS Upgrade Entity Component Architectural Design, May 2006.

M.Oglietti-M.Pacher, CGSS (CONAE Ground Stations Service) Architectural Design, Feb 2006.

M.Oglietti-M.Pacher, CGSS (CONAE Ground Stations Service) Interface Control Document, Feb 2006.

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* SAOCOM Mission:

M.Oglietti-A.Ganopol-M.Petruccioli, SAO1 GSO Personnel Plan, Oct 2013.
M.Oglietti-A.Ganopol-M.Petruccioli, SAO1 Mission Operations Working Group Plan, Oct 2013.
M.Oglietti-A.Ganopol, SAC-D/Aquarius Mission Lessons Learned for the SAOCOM Mission, Jan 2012.

Some contributions to the mission reviews:

@ SAOCOM Mission ILSOPS CDR:

M.Oglietti-M.Petruccioli, ILSOPS Organization, Jul 2013.
M.Oglietti-M.Petruccioli, MOCS/CUSS/CODS Operational Site, Jul 2013.

* SAC-D/Aquarius Mission:

M.Oglietti, SAC-D Mission Operations Requirements, Aug 2010.
M.Oglietti, SAC-D Mission Operations WBS/WPs and RECs/DELs definitions, Aug 2010.
M.Oglietti-E.Danzio, Observatory Campaign Support Plan, Aug 2010
M.Oglietti-E.Danzio, Observatory Flight Engineering For Operations Plan, Aug 2010.
M.Oglietti-E.Danzio, Integrated Logistics Support And Operations Development Plan, Aug 2010.
M.Oglietti-E.Danzio, SAC-D Mission Operation Development Project Management Plan, Nov 2010.
M.Oglietti-E.Danzio, Engineering Model Reception And Operation Plan, Nov 2010.
M.Oglietti, Mission Validation Test With FM At LIT Master Procedure, Feb 2011.
S.Cañete-G.Feldman-M.Oglietti, SAC-D/Aquarius Joint Weekly Report, Jun 2015.
C.Senyk-S.Cañete-M.Oglietti, SAC-D RTU1-A Anomaly Analysis Report, Sep 2015.
M.Oglietti-G.Feldman, SAC-D/Aquarius Mission Closeout Activity Plan, Jun 2015.
M.Oglietti-G.Feldman, SAC-D/Aquarius Closeout Activities Status Report, Sep 2016.
M.Oglietti, Requisitos del servicio de repositorio de datos de la Misión SAC-D/Aquarius, Jan 2017.
M.Oglietti, Report About Conjunction Assessment Data Destruction, Mar 2017.

Some contributions to the mission reviews:

@ ORR (Operations Readiness Review):

M.Oglietti, Mission ILSOPS Status Overview, Apr 2011.
M.Oglietti, Changes Impacting Operations, Apr 2011.

@ SAC-D/Aquarius Science Meeting:

M.Oglietti-C.Filici, Observatory Operations Assessment, Apr 2012.

@ PLAR-2 (Post Launch Assessment Review):

M.Oglietti-A.Sen-G.Feldman, Project Self Assessment, Nov 2012.

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@ MNOR-1 (Mission Nominal Operations Review):

M.Oglietti, Mission PLAR Results, Mar 2014.

M.Oglietti, Lessons Learned, Mar 2014.

M.Oglietti-G.Feldman, Mission Future Plans, Mar 2014.

@ MNOR-2 (Mission Nominal Operations Review):

M.Oglietti-G.Feldman, Major Mission Changes Since Last Review, Dec 2014.

@ Final Aquarius Instrument Review:

M.Oglietti-A.Ganopol, Lessons Learned Process And Overview, Sep 2016.

M.Oglietti, SAC-D Instruments And Observatory Summary, Sep 2016.

* SABIA-Mar Mission:

M.Oglietti-C.Barrientos, Mission Center/User Care - Características principales del sistema y su operación, Nov 2015.

>> Instituto de Altos Estudios Espaciales Mario Gulich Technical Documents:

M.Oglietti, Informe Anual 2008-2009 - Instituto de Altos Estudios Espaciales Mario Gulich.

M.Oglietti-G.Platzeck, Informe Anual 2010 - Instituto de Altos Estudios Espaciales Mario Gulich.

4.4. Otra producción científico-tecnológica

Technical Reports:

* M. Oglietti, and A. Cesta. CSTRIPS: Toward Explicit Concurrent Planning, Technical Report 27-03, Department of System and Computer Science, University of Rome "La Sapienza", 2003.

* M. Oglietti, and A. Cesta. Object Modeling in Explicit Concurrent Planning, Technical Report 27-03, Department of System and Computer Science, University of Rome "La Sapienza", 2003.

Ph.D. Thesis:

* M. Oglietti. The planning problem in AI: Structuring domains and evaluating plans, Dipartimento di Informatica e Sistemistica, Università di Roma "La Sapienza", Ph.D. Thesis, 2005.

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Ms.D. Thesis:

* M. Oglietti. Daily Variations Analysis in three dimensions, Universidad de Buenos Aires, MS Thesis, 1992.

Collaborations:

* X. Porcasi., D. Gorla, H. Hrellac, M. Lamfri, M. Oglietti, and C.M. Scavuzzo. An example of Gulich Institute applications on health: Identification of priority areas for vector control activities of Chagas disease in Argentina. Submitted to United Nations/Colombia/United States of America Workshop on the Applications of Global Navigation Satellite Systems, Medellín, Colombia, June 2008.

* V. Musso, M.C. Provensal, J. Priotto, V. Andreo, I. Simone, F. Piacenza, F. Polop, J. Polop, E. Romero, C.M. Scavuzzo, M. Oglietti. Desarrollos computacionales para el uso de información espacial en Salud, Parte 1: Simulación espacio-temporal de Roedores. XIII Simposio Internacional en Percepción Remota y Sistemas de Información Geográfica, La Habana, Cuba, Sept. 2008.

* E. De Elia, C. Arrieta, C. Rodriguez, E. Romero, M. Lamfri, C.M. Scavuzzo, M. Oglietti. Desarrollos computacionales para el uso de información espacial en Salud, Parte 2: Monitoreo de Mareas rojas. XIII Simposio Internacional en Percepción Remota y Sistemas de Información Geográfica, La Habana, Cuba, Sept. 2008.

* M. Oglietti, M. Scavuzzo, The Gulich Institute - An Inter-Institutional Initiative On Space Education, Toulouse Space Show, Space Applications, Education Session, Toulouse, France, April 2008.

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