

Ulf Walter Palme

Humanitarian Infrastructure Programs Design & Management Consulting

Summary

- ✓ Broad range/scope Senior Consultant in Business Development with singular background in technical-scientific knowledge and business development, including market studies, marketing technical innovations and innovative technology services / products, strategic relations and contract negotiations.
- ✓ Remote Sensing & Geoprocessing Specialist with extensive background in Sensor Systems and Applications for Territorial Management in Agriculture, Environment, Forestry, Cartography & Mapping, Rural & Urban Management and Planning, Real Estate Development, Intelligence & Defense.
- ✓ Pioneer in the development of Geographic Information Systems (GIS), Technical Cadastre (rural and urban), GPS systems, Synthetic Aperture Radars (SAR systems),
- High Resolution Imaging Satellite Systems (IKONOS, Quick Bird, World View), 3D systems as Google Earth y Skyline. ✓ Solid, versatile & validated background in the last 40 years having worked in almost all type of organizations: Governmental Agencies / Ministries, Foundations, NGO,
- Private Companies, Multinational and Transnational Corporations, Cooperatives, as a Consultant / Advisor, Expert & Company Owner.
- ✓ Certified Project / Program Manager for over 50,000 h. in different technical scopes, environments and countries/cultures.
- ✓ Generated results & benefits over large Geographic Areas, as Responsible Expert, Technical Manager, in different areas of knowledge, in Land Use Mapping and Cartography and GIS generation with different technologies and at scales from 1:250,000 to 1:500, with the following metrics: Deforestation Assessment: Brazilian Legal Amazon (5,000,000 km²): six consecutive Assessments of the Deforestation (Gross Deforestation & Rate) at the Institute for Space Research (INPE, Brazil) for the Brazilian Government, totalizing a GIS of 30,000,000 km²; Agriculture, Environment, Hydrology: 3,800,000 km²; Urban Areas: 11,000 km²; Highways and Infrastructure: 6,500 km.
- ✓ With over 1,000 flight hours in experimental and operational airborne remote sensing systems (aircrafts and helicopters) using visible, infrared and microwave technologies, for testing and validating new technologies for satellite systems to be launched.
- ✓ Worked in Brazil, most of South America, USA, and Europe. And with professionals from Africa: Ghana, Tanzania, Angola, Nigeria, South Africa, Mozambique and Ethiopia. And India, China & Japan.
- ✓ Professional activities within the scope of the Brazilian Armed Forces, Intelligence and Defense Organs, mainly in Advanced Remote Sensing and Remote Sensing Techniques - Management and Geoprocessing, comprised: Consultancy, Advisory, Training and Lectures, Technological Innovations for organs such as: Institutional Security Cabinet of the Presidency of the Republic - GSI, General Staff of the Armed Forces - EMFA FA-61 Commission, Advisory Office of the Minister of Defense, Military Supreme Court - STM, Southeast Military Command - CMSE, Brazilian Air Force - FAB, SIVAM Coordinating Commission - CCSIVAM (Amazon Surveillance System), Amazon Protection System - SIPAM, Amazon Military Command - CMA, Jungle Warfare Instruction Center - CIGS, Aerospace Technical Center - CTA, Military Engineering Institute - IME, Land Operations Command - COTER, Brazilian Army - Department of Engineering and Construction - Directorate of Cooperation Works - DEC (Awarded as Emeritus Lecturer of the Ministry of Defense - Brazilian Army - Department of Engineering and Construction - Directorate of Cooperation Works (Sv O Fort Ex / 1946)), Brazilian Intelligence Agency - ABIN, Department of Federal Police - DPF (Ministry of Justice and Public Safety);
- ✓ Creator & Manager of the INOVOH HUMANITARIAN PROGRAM OF INFRASTRUCTURE PROJECTS as a result of a personal investment of more than 22,000 dedicated consulting hours. First planned for Paraguay (country level <u>www.jahupiparaguay.com</u> or <u>www.paraguayrise.com</u>). The PROGRAM simultaneously addresses the following Axis Themes through Integrated Projects working in Local Territories (municipalities) and Regional Territories: Territorial Management, Housing - Sustainable Communities (including Original Peoples) and Adequacy of Precarious Housing, Food Security, Sanitation and Environment, Well-being and Health, Clean Energy, Infrastructure and Logistics. Additional themes can be included. Currently being replicated in essence, with local adaptations, for a total of 9 countries in South America, 7 countries in Central America and the Caribbean, Mexico, and the 20 needlest countries in Africa. Food Security (nutritious food on the table every day, including school meals) is considered the first priority among the seven core themes.





National Institute for Space Research - INPE - Brazil MSc. in Remote Sensing



Diploma

UFLA – Federal University of Lavras (ex ESAL) - Brazil Agronomist, Rural Eng. and Phytopathology Monitor.









Current Main Activities



> INOVOH HUMANITARIAN PROGRAM FOR INFRASTRUCTURE PROJECTS; Replication to Countries;

1974-76

- Consulting & Advisory Services;
- Lectures;
- > Translation

Core Experience

Senior Technology Development Engineer, Remote Sensing Consultant, GIS, Project Design & Management. Lecturer.

Professional Activities as Consultant in Remote Sensing, Geographic Information Systems (GIS), Project & Program Management. Details of projects and activities with certificates, letters of recommendation and attestations and reports can be viewed in the Data Base in this CV and at www.ulfwalter.net in the Project Gallery section. The icons on the side are links to the appropriate websites.

1984 - 96

Since 2002

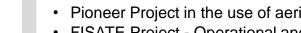
National Institute for Space Research - INPE

Senior Technology Development Engineer, Manager, Technical Responsible

Responsabilidades:

- Crop Forecasting Group Remote Sensing Division DSR, Remote Sensing Directorate.
- Manager & Specialist in Charge Microwave Remote Sensing Program, emphasis on Imaging Radars (SLAR & SAR). Optoelectronics Division Space Engineering Directorate.
- Founder and Member of the Board Directory of Earth Observation OBT.
- Teacher of Training Courses for the Macro-Zoning of the Legal Amazon emphasis on Imaging Radars.
- Manager and Responsible Specialist PRODES Project. Evaluation of the Deforestation of the Amazon (5 million km²) years 91/92/94/95. Generation of a new Digital Territorial Database (GIS) of reliable reference for the Brazilian Government and the international community. Directory of Earth Observation (OBT). Under my Management, in two phases as Manager by INPE and later as Manager by FUNCATE, the assessments were carried out together with FUNCATE and Geoprocessing companies, in a total of approximately 500 technicians, and 12 auditors from INPE.
- Professor of disciplines of the Master in Remote Sensing Course and International Course in Remote Sensing at INPE.





- Pioneer Project in the use of aerial photography for agricultural credit inspection in the region of Irecê Bahia, motivated by the Cassava Scandal.
- FISATE Project Operational and pioneering use of satellite images from the Landsat series in agricultural inspection & monitoring. Prevented 17% of frauds in Banco do Brazil's credit operations for agribusiness in a harvest scenario of over USD \$ 100 million through Remote Sensing
- techniques.

German Aerospace Center – DLR 1988 - 91 **Guest Scientist**

- Bilateral cooperation, joint missions and technology transfer (between INPE / CTA and DLR). Microwave Radiometry for soil moisture determination.
- SAREX Project Operational Detection of Oil Pollution at Sea by Microwave Systems in aircrafts. Specialist in RADAR Imaging Systems and Applications notably Cartography (Digital Land Models) and Agriculture.
- Project Radim Radar Imager Installation in Bandeirante aircraft of the Brazilian Air Force FAB.
- Installation of SAR (Synthetic Aperture Radar) Image Processor at INPE.

1994 to present

FUNCATE

FUNDAÇÃO BB

Fundação de Ciência, A e Tecnologia Espaciais

Public Prosecutor's Office State of São Paulo & Federal Public Prosecutor's Office – Brazil **Designated Technical Assistant and Expert**



- Public Prosecutor's Office S\u00e3o Paulo. Recovery of the Serra do Mar region and elimination of irregular organochlorine residues in the Baixada Santista region (Rhodia case). Technical assistance to the Public Prosecutors in the districts of Baixada Santista, especially Cubatão. Attendance to meetings, generation of technical documentation.
- Federal (Public Prosecutor's Office. Elimination of irregular organochlorine residues in the Baixada Santista region (Rhodia case), and in environmental issues since 2001. Technical Assistance to the Federal Attorneys in Santos. Attendance to meetings, generation of technical documentation.

1996-97

Foundation for Science, Technology and Space Applications- FUNCATE Remote Sensing and Geoprocessing Manager

• Restructuring of the team and infrastructure with 30 technicians in an area of 500 m² and recovery and expansion of FUNCATE's technical credibility and

technical/financial performance in Remote Sensing and Geoprocessing. Presentation of the New Funcate in Congresses and Symposiums such as GISBRASIL and GEOBRASIL.

- Main clients with Projects Audited / Remade: OLHO VERDE Project Survey of the Natural Vegetation of the State of São Paulo State Department for the Protection of Natural Resources - DEPRN - Secretariat of Environment of the State of São Paulo - SMA, Environmental Planning Coordination, IEF Project - Survey of the Natural Vegetation of the State of Minas Gerais - State Forest Institute of Minas Gerais (IEF), ENGECORPS - Macro-zoning of the Ribeira Valley - SP, Project: Support for Activities of the Brazilian Army and Capacity Building of Institutions.
- Manager and Responsible Specialist PRODES Project. Evaluation of the Deforestation of the Amazon (5 million km²) for the years 96/97. Generation of a new multi-temporal
- territorial database (GIS) 1991-1997 of reliable reference for the Brazilian Government and the International Community (continuation of the work initiated as Manager at INPE).
- Diagnosis and Proposal of a New Rural Technical Cadastre for Brazil, work done for the National Association of Land Agencies ANOTER with the participation of the Federal University of Santa Catarina - UFSC.

■ LouisDreyfus

1998

1999

FUNCATE Ablici

e Tecnologia Espaciais

Comércio e Industrias Brasileiras - COINBRA S.A. - Louis Dreyfus Group Assessment of Areas Occupied with Coffee Crops through Orbital Images and GPS Techniques **General Coordinator, Technical Responsible and Executor**

Survey in an investigation area of 470,000 km² in the States of Paraná, São Paulo, Minas Gerais, Espirito Santo and Bahia.

- Implementation of a Geographic Information System (GIS) from field work including measurement of Areas with Differential GPS from: 39 Landsat scenes, 751 topographic maps, 3,800 machine hours, 1,200 hours of image analysis, 33 DGPS bases installed, field mobilization of 178,000 km in 109 days, team participation of 53 technicians within 9 months.
- Establishment of a new reliable territorial reference for commercial coffee transactions.
- Results are of a confidential nature.

Projeto Integração - Diagnostics of the National Institute of Land Reform - INCRA (Directorates of Cadastre, Land **Regularization and Settlement Projects)**

Inter-American Institute for Cooperation on Agriculture / World Bank Consultant

- Establishment of a Methodology incorporating Remote Sensing and Geoprocessing techniques in the 28 Regional Superintendencies of INCRA, taking into consideration the aspects of Cadastre, Land Regularization and Settlement.
- Diagnosis, equating and due solution of the situation of approximately 3,740 Settlement Projects (cartography, survey of natural resources, etc.), including the feasibility of producing technical pieces directed to the titling and issuance of the parcel collection document and its complements.
- Capacity building of INCRA technicians in the proposed methodology.



Personal Info

Date of birth 1956-06-05



Citizenship Brazilian and German

Languages & Cultures Portuguese mother languages German

fluent Spanish French basic Guarani

English

E-mail palme.ulfwalter@proton.me



www.ulfwalter.net (portfolio) www.inovoh.com

www.jahupiparaguay.com www.paraguayrise.com



Intl. Phone

+ 55 48 9 9672 3515



linkedin.com/in/ulfwalter



My Positioning Message

This is a message about my **positioning in** life and how I have acted throughout my professional and personal life continuously. Just to provide for a flavor of **WHO I AM**. My purpose & commitment.

The English verb "to care" expresses very clearly the desire to care about the next person, about the groups we live and the society we participate, including ourselves. But its meaning goes far beyond compassion! And I DO CARE!

Having professional competence is paramount, but alone, it is not enough. Most resumes are a list of where people have worked. There is no true information & knowledge of what they care about, what benefits were generated or problems solved. New times are demanding that, as we all are tired of bad alerts and humanity is looking for practical examples, that can be followed and replicated. I have also generated an **Accomplishment CV**, following a recommendation of a dare friend headhunter, listing the benefits my work generated and also the fails.

Following NATURAL LAW (based in Principles & Truth) and choosing LOVE and Consciousness, is the beginning of everything we use to create, called Generative Polarity, and its initial expression is manifested through the acceptance of the TRUTH (absolute & singular), the KNOWLEDGE. Know the TRUTH and it will set you free! Our interior will manifest our SOVEREIGNTY; in society it leads to FREEDOM as external expression and that manifests ORDER, as a result that we create. Only in this way will development, or better, PROGRESS, be possible.

LOVE → KNOWLEDGE → SOVEREIGNTY → FREEDOM → ORDER and PROGRESS. That is the POSITIVE cycle of the NATURAL LAW EXPRESSIONS.

The other possibility is the path that we all know and live the consequences daily....the NEGATIVE cycle of FEAR → IGNORANCE → CONFUSION → CONTROL → CHAOS and EXTINCTION.

Choosing the path of LOVE, requires awakening, willingness, transparency, courage, persistence, excellence, honesty, and leaving the comfort zone. **INOVOH** our Humanitarian Program is embedded in the Love path. And it will require a deep and true decision from each one, who wants to participate, with thoughts, emotions and ACTIONS. There are only two possibilities...LOVE or FEAR!

The immediate challenge, the Great Work is to show the path of creation through LOVE and CARE. And that starts inside ourselves, as a living example.

The ORDER and PROGRESS (phrase

embedded in the Flag of Brazil, my Homeland I am proud to have been born) are the manifested Good for the society. All people have the same right and there is always free will. To choose their path. There are no chosen, enlightened, special ones. It is necessary to choose oneself. I have been deciding through all my life to do the right things, right. It has been my drive. But with actions and not speeches. Most of the time I have won the win Ribeiro game of life. Sometimes we lose. And then it's when we learn and correct the path. Without relative moralism. There is only RIGHT or WRONG.

Best regards

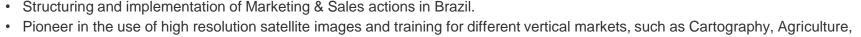


2000-01

SPACE IMAGING

Space Imaging LLC, nowadays MAXAR

Manager Brazil



Forestry, Environment, Engineering, Logistics, Infrastructure, Tourism, Journalism, Police, Intelligence and Defense. Structuring of reseller channels and dissemination of the technology.

Participation in events such as Congresses, Symposiums, Workshops, Roundtables, at National and International levels

Interview in Programa do Jo on 27.09.2001, about the new technology of high definition images and benefits from the IKONOS satellite.



VIDEO

Interview



2002-03

LOCKHEED MARTIN

Lockheed Martin Space Systems

10 International Paper

• Presentations on Lockheed Martin's technologies, notably on Orbital Synthetic Aperture Radar Imaging Systems (SAR) and their benefits and possibilities for Brazil.

Presentations made to the scientific community, INPE.

Consultant



A fast and low-cost method that does not trigger real estate speculation.

11 County Association of the State of São Paulo / Associação Paulista de Municípios – APM

Consultant

• Lectures on territorial planning and management, using Remote Sensing and GIS techniques. How to make the Municipal Master Plan?

Orientation and assistance to Mayors and their teams.

Generating benefits for the administration of 645 municipalities through Remote Sensing Techniques and Territorial Management.

Presentations in different CBTIM - Brazilian Congress of Information Technology for Municipalities on the benefits of Territorial Management also in Municipal Finances

12 Military Institute of Engineering / Instituto Militar de Engenharia (IME) Consultant

• Introduction of Advanced Remote Sensing Techniques with High Definition Satellite Images for Operational Use in Transportation Projects - Planning & Physical Control of Works.

· High Definition Imaging and SAGARF availability of sections of BR 101 - Northeast Highway, in the States of Alagoas, Pernambuco, Paraíba and Rio Grande do Norte, and in support of Centran's Environmental Management services (through the companies SIGMA and InteliGEO).

• Diplomate as Emeritus Lecturer of the Ministry of Defense - Brazilian Army - Department of Engineering and Construction - Directorate of Cooperation Works (Sv O Fort Ex / 1946).

2004-05

JWC

NIPPON KOEI LAC

cocamar

FUNCATE Ciangia Aplica

U SANASA

SINDICATO RURAL SEBRAE

abrasel

2008-11

2014-15

NIPPON KOEI

NIPPON KOEI LAC

BID

NIPPON KOEI

NIPPON KOEI LAC

OBRAS PÚBLICAS Y COMUNICACIONES

2015-16

2015-18

Nottingham

2017-18

2017-18

present

e Tecnologia Espaciais

2002-06

DNIT

Foundation for the Development of the Brazilian Semi-Arid Region – FUNDESA & National Institute for Colonization & Land Reform - INCRA - BRAZIL

General Coordinator & Responsible Expert

Georeferenced Cadaster of Rural Properties in Municipalities of Pernambuco

At that time UWC Consulting was UWP Engineering

2006-07 Nippon Koei LAC

Consultant

 Mapping of National Parks - State of Tocantins - Brazil - 2006/07. • Lecturer at the Programa Nacional Manejo de Cuencas Hidrográficas - PRONAMACHS - Perú - 2006.

2008-11

COCAMAR – Cooperativa Agroindustrial

Consultant in partnership with Jason San Souci – AFE ADVISOR LLC – USA.

• Mapping of Land Use in Cocamar's 30 Business Units. Confidential results. • Estimation of soybean cultivated area by satellite images in comparison with the traditional method of the Cooperative. Deviation of 3.1%, below the compromise of 5%,

being faster and less expensive. Confidential Results.

2008-11 **16** Foundation for Science, Technology and Space Applications- FUNCATE for SANASA S.A. Consultant in partnership with Jason San Souci - AFE ADVISOR LLC - USA.

• Generation of an Orthomosaic for the municipality of Campinas (800 km²) derived from high-resolution IKONOS 2008 images and compatible with 1:2000 scales, a DTM (Digital Terrain Model) derived from World View I stereo pair images with final accuracy of 1.6 m and contour lines of 2.0 m, and an implemented geodetic network of 19 points within the municipality mosaic

· Adjustment of the distorted vector database (over 200,000 plots) to the new Orthomosaic.

database and over 30 points for the DTM area.

Extraction of the building.

• Generation of a 3D of the entire DTM area (1,300 km²).

 Insertion of all information in a GIS. Generation of technical documentation

Generation of a new Orthomosaic with GEOEYE images from 2010 and updating of the vector database.

· Comparison of data from 2008 and 2010 with focus on urban growth and environmental analysis. Innovative work in large areas being much faster and less expensive than aerial photogrammetric procedures and with comparable quality and accuracy. A good quality database for monitoring urban dynamics. Article on the quality of Orthomosaic 2008 published in Geoinformátics.

Rural Syndicate of Mogi das Cruzes, SEBRAE, APHORTESP, AFRUT, ABRASEL, APAS

Through GEOVISO – Consultoria e Assessoria Empresarial LTDA. Consultant

 Project GeoCadastro & Land Use Mapping in the Agribusiness Chain - Strengthening the Rural Productive Chain to Supermarkets, Industrial Restaurants, Fast Food chains and other Vertical Markets in the São Paulo Metropolitan Area - Brazil.

150 leading rural producers connected to 300 commercial establishments such as industrial restaurants, fast food chains.

Syngenta – Crop Protection 2010-11

Through GEOVISO – Consultoria e Assessoria Empresarial LTDA. syngenta

Consultant in partnership with Jason San Souci – AFE ADVISOR LLC – USA.

• Pilot Project with the development of a methodology for pre-visual detection and identification of vigor changes (diseases) in citrus crops. Confidential results.

19 SANASA S.A. 2012-13 **Coordinator of Territorial Management USANASA**C A M P I N A S

21

 Implementation of a Territorial Management System (Water and Sewage) - high definition images and corrected vector base, optimized for the Municipality of Campinas - SP - Brazil. It allows the management of the routine monitoring of the dynamics of the territorial area in which the company operates from remote sensing techniques integrated with field data, historical data and other information of interest.

Consortium Nippon Koei – Nippon Koei LAC – Non-Refundable Technical Cooperation ATN/JF-12342-PR MOPC – IDB Consultant

National Storm Drainage Program - MOPC - Paraguay - 2014/15

Provide guidelines and the theoretical knowledge necessary for the management of geographic information and its georeferencing; > Coordinate and evaluate the organization of the models, together with the mathematical modeling professional, and the organization of the georeferencing of the results;

> Orientation and review of the georeferencing of the information collected and the information generated;

> Coordinating the preparation of the digital cartographic base of the entire municipality of Gran Asunción; mapping of 23 cities in Paraguay with more than 30,000 inhabitants, highlighting the critical points for future flood containment;

Consortium Nippon Koei, Nippon Koei LAC e INAR Asociados, for Corporación Autonoma Regional de Cundinamarca - CAR

Development of the Program's GIS;

> Professor of the course Remote Sensing: Benefits for Territorial Management of the Stormwater Drainage Sector, during the Program to Support the Workshop on Strategic Planning and Institutional Development of the Stormwater Drainage Sector in Paraguay, held from April 20 to 25, 2015 at the Faculty of Engineering of the National University of

- Bogotá - Colômbia. Contract 753-2015. Consultant

Integrated Management Plan for the Bogota River Basin - Colombia - 2015/16;

Project GIS Group Coordinator;

> Technical and Geographic Information Review; Use of GIS Information in the simulation models; also as an Agronomist;

Preparation of the cartographic base, including Digital Elevation Model (DEM); Provision of orthophotos of the Bogotá River Basin (6,000 km²);

Multitemporal analysis of land use changes for 2005, 2011 and 2015 based on Landsat 8 images; and of watersheds up to 3rd order, 2015 images; > Development of a methodological proposal for the Environmental Vulnerability Index;

> Supply of the Manual for Implementation of the Environmental Vulnerability Index.

Nottingham University Business School - NUBS, Ningbo China Campus. Mentor no Programa de Mentoría Global – GMP

The Global Mentoring Program aims to support students' personal and professional development by providing direct access to experienced professionals in a profession/industry. Experienced international mentors provide guidance, mentoring, resources and support to trainees during their university years, helping them to prepare their personal career profile as well as develop the professional skills needed for a successful and fulfilling career.

Ministry of Public Works - MOPC - Paraguay

INOVOH PARAGUAY SA for Helitactica SA and African Consulting Surveyors

Consultant

• Generation of 3D Topographic Assessment (LiDAR+Ortofotos) of the Pilcomayo River Area comprising 67,000 ha. Orthophotos of 5 cm, MDT of 50 cm, contour lines of 25 cm.

Specialist responsible for structuring the database and generating the Final Technical Report for the MOPC.

Joint FAO & IAEA Program - Viena

Expert, Professor of Remote Sensing.

• Expert Mission to Ecuador on behalf of FAO / IAEA and MAGAP / Ecuador. The Mission of Experts is in the context of the use of UAV for Agriculture for the National Irrigation Plan aiming at the modernization of 60,000 hectares of irrigation for smallholders in the coastal and Andean region of Ecuador. The project is under the coordination of MAGAP of Ecuador, with funding from the World Bank.

INOVOH Paraguay SA 25 2015 to

Providing specialized engineering services in the areas of sanitation, hydraulics, water resources, and remote sensing.



Skills

Sense Making, Social Intelligence, Novel & Adaptive Thinking, Cross-Cultural Competency, Computational Thinking, New Media Literacy, Trans disciplinarity, Design Mindset, Cognitive Load Management, Virtual Collaboration. Successfully used these Work Skills in small projects and in large endeavors like the Assessment & Monitoring of the Deforestation of the Brazilian Amazon (5 million km²), of agricultural crops, in activities like Innovation, Marketing, Business Planning / Project Design & Management, Compliance, Valuation, Mapping & Development, Executing, Team Leading, Team Player, Sales, Negotiation, Problem Solving, Report Writing, Education, Translations and in areas like Applied Remote Sensing (Sensors Systems - optical, thermal and microwaves) and large GIS systems, with Adequate Territorial Management / Monitoring in different applications (Food & Agriculture, Urban Planning, Infrastructure, Environment, and Cartography & Defense), Agribusiness, and Consumer Goods & Services.

WAYS I CAN HELP: generate better Working Environment, Revenue, Increase Assertive Planning, Compliance, Lower Risk & Prejudice, Optimize Procedures, Executing, Implement New Structures, Education. Open to work in new areas and subjects were my experience can be useful. Innovation & Marketing, as well as, Business Development, are embedded in my professional identity. Investment Projects, as well as, Humanitarian Aid Projects (Non Refundable Funds) also became my focus through Project Design, Valuation and Implementation / Management. Just give me a call or send me a message.



Ministry of Defense. Lecturer in graduate and post graduate courses as the National Institute for Space Research – INPE (<u>www.inpe.br</u>), Military Institute of Engineering - IME (<u>www.ime.eb.mil.br</u>) Brazil and United Nations University – UNU (<u>www.unu.edu</u>), national and international events, congresses and symposia - Mundo Geo Connect, Geo Brasil, GIS Brasil, ISPRS, IGGARS.

Lecturer Emeritus of the Brazilian



Publications

PDF

List of main conferences & Scientific Papers and Publications in Events and Journals since 1984. PLEASE REFER TO THE Database of the Ministry of Science, Technology, Innovation and Communication of Brazil.



References **Partners**



Certificates

this CV and

Please refer to the Database in

www.ulfwalter.net (portfolio)







OBRAS PÚBLICAS Y COMUNICACIONES







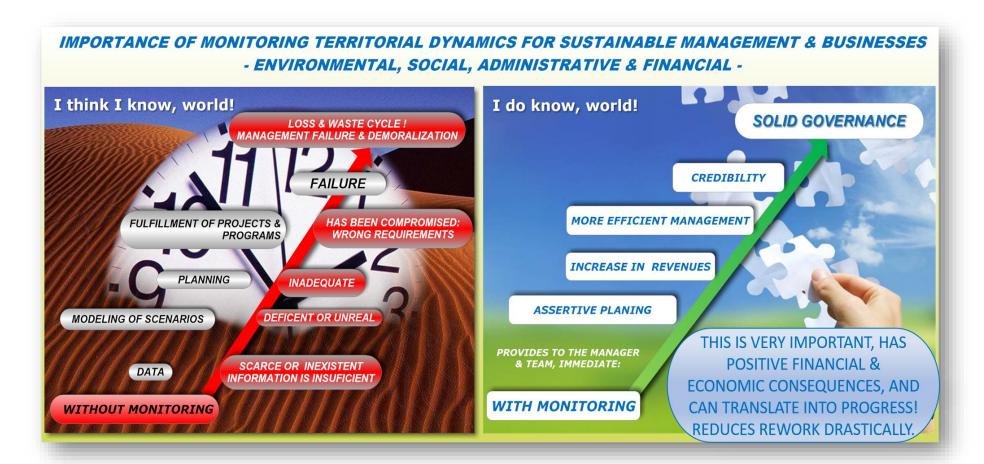






Here you will find, for viewing and downloading, examples of results from the Projects and Activities I have carried out in my professional life. Most of them contain innovations, especially in Remote Sensing, Geoprocessing and Management techniques. For this reason also many results were considered confidential. There are also letters of recommendation and certificates of project completion. Not all of them are in a presentation format, and most are not in English, but they provide for a very good insight and represent the memory of work done with much effort and love, especially in teams. Team management is certainly one of the great challenges always. Also not here are most of the Final Reports delivered to clients.

The screen on the right represents, in my belief, one of the most valuable lessons about the importance and consequences of Territorial Management and its positive (or failing that, negative) impact on people's daily lives. I built this screen from the Cycle of Loss and Waste. And to generate positive impacts on society, it presupposes honest and transparent attitudes. I was able to test, prove and validate the assertive functionality of Territorial Management (Territorial Reference and its Dynamics), and its environmental, social, economic and administrative benefits. in different themes, geographies and cultures.



Through Territorial Reference and Monitoring the Region (in all levels of Public and Private Governance) will be favored in assessing Assertive Planning Strategies.

Breaking Paradigms to Foster Progress with Validated Management Strategies



ARCHIVES DATABASE & ACCOMPLISHED RESULTS

Next we present the main Projects carried out and the Accomplished RESULTS.



Agronomist by UFLA - University of Lavras (Ex Escola Superior de Agricultura de Lavras) - MG - Brazil. www.ufla.br

Career at the Institute for Space Research (INPE) - Ministry of Science, Technology and Innovation - Brazil. <u>www.inpe.br</u>

Engineering (DER). Results accomplished.

Graduation in July 1982 and in the sequence Trainee in the Regional Center for Photogrammetry and Photointerpretation, of the Department of Rural



Senior Technology Engineer, Manager, Member of the Board / Directory for Earth Observation (OBT).

Member of the team assigned for structuring the Directory for Earth Observation (OBT) - that exists until today – and that broadened INPEs activities internationally, fostering INPEs visibility and national / international cooperation. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Results accomplished.

Manager of the MONTEC Program – Microwave Remote Sensing and New Technologies. Successful implementation of the Radar Technologies from DLR (software and hardware) allowing Brazil to enter the selected group of countries that dominates main imaging RADAR technologies. Economy in time and money. Founding of a group of specialists that exists until today. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Accomplishments exceeded client's expectation.

Successful Education of Professionals from Brazil, Latin America and Africa as Lecturer in the International Course in Remote Sensing INPE / United Nations University - UNU (post-graduation level) over seven editions of the Course, INPE post-graduation, Universities. Supervision of postgraduate theses. Lecturer at Congresses / Events. Results accomplished.

Activities in Brazil, USA, Peru, Colombia, Venezuela, Germany, Scotland.



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Multitemporal Deforestation Assessment of the Amazon over 5 million km² for the Brazilian Government - The new reliable GIS Territorial Reference.

Manager / Responsible Expert of the PRODES Project – Assessment of the Deforestation of the Brazilian Amazon (the largest environmental territorial monitoring project: 5,000,000 km²); innovative structuring and definition of the satellite image analysis methodology for generating fast, reliable and transparent figures with new requirements and boundary conditions – stratification of the Amazon in several complexity level areas - for the assessments of 1991, 92 and 94 and future assessments, turning territorial monitoring of the Amazon a viable reality. Management of a team of 11 INPE experts, 30 professionals from FUNCATE and about 12 outsourced companies in a total of about 300 technicians. PRODES required over 15,000 machine hours and 30,000-man hours with a budget of 2 million USD. Successful generation in record time (1.5 years) of new official reliable world recognized figures for the Deforestation of the Amazon in Brazil in a dedicated GIS. Establishment of the new PRODES reliable digital database and products. Results confidential until released by the Ministers. Because of this accomplishment having as final clients the Ministry for Science, Technology and Innovation, the Ministry of the Environment and the Ministry of Foreign Affairs, INPE received from the Federal Government initial funding in the order of US \$ 13 million to continue the Project and gradually move to the 100% digital database that exists updated until nowadays. Set up of the marketing of the Project and results. Public speaking on the Results. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading Accomplishments exceeded client's expectation.



Avoiding Fraud in Bank of Brazil Agribusiness Credit Operations in an over 100 million US dollars multicrop harvest scenario through Applied Remote Sensing Techniques.





FOUNDATION FOR SPACE SCIENCE, APPLICATIONS AND TECHNOLOGY. www.funcate.org.br

Consultant / Responsible Expert: FISATE Project. Final client: Bank of Brazil Foundation. Developed & executed methodology for image analysis using applied satellite remote sensing techniques (crop monitoring), aiming early identification of fraud in rural credit operations. Target 2,370 farms – 432,700 ha – soybeans, corn, rice, wheat and beans for 45 branches of the Bank in 8 States in Brazil. Early Identification of 17% fraud (US \$17 million) in the amount of US \$100 million in credit operations. Project costs of US \$1.5 million. Delivery in time and within budget. Set up of the marketing of the Project, presentations of the project including results. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Accomplishments exceeded client's expectation.



PDF

Guest Scientist at the Institute for Radiofrequency Technology of the German Aerospace Center (DLR). 3

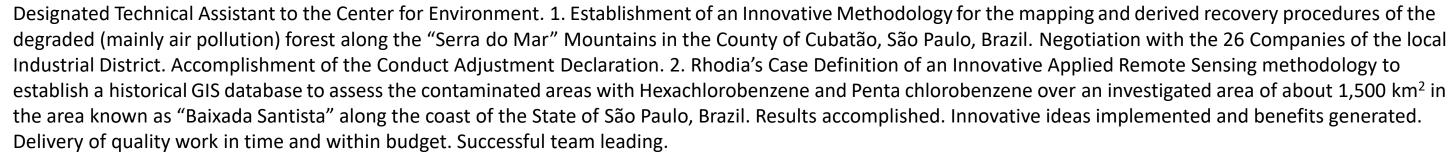
GERMAN AEROSPACE CENTER - DLR - GERMANY. Bilateral Cooperation Agreement between Brazil & Germany. <u>www.dlr.de.</u> Guest Scientist at the Institute for High Frequency Technology in Oberpfaffenhofen. Microwave Imaging Systems & Applications for monitoring in Marine Pollution & Agriculture and generating Cartography. Successful transfer of the Synthetic Aperture Radar (SAR) processing and Real Aperture Radar technologies to INPE in Brazil. Enhancement of applied microwave radiometry methodologies for the Institute. Results accomplished.



PDF L.

Helping the State Attorney of São Paulo in the Area of Cubatão - one of the most polluted areas of the planet - Designated Technical Expert in Environment Remote Sensing.









Voluntary work for the Federal Attorney of Brasil in Environmental Remote Sensing - Expert.

FEDERAL PUBLIC MINISTRY IN THE STATE OF SÃO PAULO - BRAZIL. www.mpf.mp.br

Nominated expert to the Rhodia's Case, of Organochlorine Polluted Areas. Volunteer to help the Federal Prosecution in environmental issues that can take advantage of Applied Remote Sensing Techniques. Confidential work.





PDF

Managing Extensive Mapping Projects as Manager of FUNCATE - Foundation for Space Science, Technology and Applications.

FUNCATE – FOUNDATION FOR SPACE SCIENCE, APPLICATIONS AND TECHNOLOGY - BRAZIL. <u>www.funcate.org.br</u> **Manager Remote Sensing.**

Manager of the PRODES (Assessment of the Gross Deforestation and Rate of the Legal Brazilian Amazon – 5 million km²). Assessments for 95, 96 and estimates for 97, in continuation to the activities as INPEs Manager. First annual synthesis maps (95,96) for the deforestation over the 5,000,000 km². Set up of the marketing of the Project, presentations of the project including results to the ministers. Results confidential until released by the Ministers. As a consequence of these new assessments several beneficial actions were taken by the Brazilian Government regarding new environmental criteria, regulations, laws including forestry concessions, etc. Accomplishments exceeded client's expectation.

Besides the PRODES Project, my main mission at FUNCATE was to restore the credibility of the Foundation associated to INPE, regarding several large mapping projects and also foster new projects and revenue, and the visibility of the new FUNCATE with the scientific community & Remote Sensing companies. A hard task that was fulfilled within 19 months of a fantastic teamwork of around 30 people I had the opportunity to lead. Complete Vegetation Mapping and GIS for the State Secretary for the Environment of the State of São Paulo – Project "Green Eye" (247.898 km²) and the Forest Institute of the State of Minas Gerais (587.172 km²) and the Macro Zoning of the "Ribeira Valley" GIS (30.000 km²) were delivered in the new timeframe. Official certifications of conclusion and acceptance were granted to FUNCATE. Several other new projects were initiated with new clients including a Diagnosis & Definition of a Unified Technical Rural Cadaster for Brazil (~ 4,500,000 rural properties), together with the 27 State Land Agencies. And other 12 Projects. Successful courses were offered to the Brazilian Army; FUNCATE participated in several Congresses and Events. Development of GIS systems. Credibility restored and revenue in the order of 15 million USD generated in this period. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Accomplishments exceeded client's expectation.



Coffee Plantation Assessment in Brazil for Louis Dreyfus Commodities - COINBRA SA.



LOUIS DREYFUS COMMODITIES / COINBRA SA – USA & BRAZIL <u>www.ldcom.com</u>

Manager & Responsible Expert.

Results are confidential. Innovative Coffee Plantation Assessment in Brazil over an area of 470.000 km² (States of Paraná, São Paulo, Minas Gerais, Espirito Santo and Bahia). Definition of the methodology. Implementation of 22 DGPS Stations for DGPS measurements of coffee areas. Machine hours: 3,800. Man hours (interpretation): 1,200. Team of 53 people: fieldwork of 178,000 km in 109 days. Results consolidated in a GIS. Budget of 1,070,000 USD. Innovative results allowed Dreyfus to have a clear and singular coffee database knowledge for coffee trading purposes. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Results accomplished.





Brazilian Land Reform Projects: Diagnostics & Solutions in Rural Cadastre, Land Regulation & Land Reform Projects of the National Institute for Colonization & Land Reform - INCRA - BRAZIL, for the Interamerican Institute for Cooperation in Agriculture - IICA and World Bank. Universe of 3,740 Land Reform Projects.

IICA / INCRA / WORLD BANK - INTER AMERICAN INSTITUTE FOR COOPERATION IN AGRICULTURE. BRAZIL - <u>www.iica.int</u>

Consultant & Responsible Expert. Term of Reference of the World Bank. Project "Integration" (Projeto Integração) of the Brazilian Land Reform Agency, consisting of: 1. Identification and recovery of the passive of the Land Reform Agency (INCRA) Settlement Projects in Brazil, including a Pilot Project with a new methodology; 2. Diagnostics of the current situation of all of the Settlement Projects (around 3,200); 3. Establishment of an Education / Training Program of INCRAs personnel in the new methodology that includes Remote Sensing and Geoprocessing techniques. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Results accomplished.



Introducing IKONOS High Resolution Imagery in different Vertical Markets in Brazil - Space Imaging Manager Brazil. SPACE IMAGING – USA & BRAZIL. www.spaceimaging.com.





Sales Manager / Business Manager BRAZIL.



Mission was to market the pioneering era of the new high-resolution satellite images of the IKONOS Satellite (the first private high-resolution imagery satellite) and its benefits. Actions taken in parallel: 1. Set up the marketing material in Portuguese; 2. Presentations (education in Portuguese) of the new satellite and products to Governmental Agencies & Private Sector in different segments, like, Defense, Cartography, Agribusiness, Urban Planning, Environment, etc.; 3. Lectures and presentations in events, fairs, Technical meetings; 4. Carry out pilot projects in different markets; 4. Establish the reseller channel in Brazil. Over 80 presentations were delivered in this period in all possible audiences. A targeted action was undertaken with TV GLOBO (second largest TV network in the world) regarding the use of the imagery in the media. According to TV GLOBO staff the images deliver benefits to the audience in better understanding the phenomena that affect citizens in daily life. This was a very successful initiative that started the era of enhanced media with satellite imagery in Brazil, and followed by all TV networks. An interview of myself in the daily program "Programa do Jô" on the 27th of September 2001, of about 20 minutes, focusing the new Technology and Applications and the recent registered World Trade Center attacks, was broadcasted to over 40 million Brazilian citizens. Target revenue of 3 million USD defined for the territory was accomplished. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading Results accomplished.



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Applying Advanced Remote Sensing Techniques for Territorial Management of Counties for the State of São Paulo County Association APM - Brazil.

APM – COUNTY ASSOCIATION OF THE STATE OF SÃO PAULO - BRAZIL. www.apaulista.org.br

PDF **Consultant and Invited Lecturer.**

> Consultant to the members of the Board in Urban Planning and Territorial Monitoring through satellite imaging. Lecturer to APM Events and Congresses, especially focusing Municipal Master Plan, highlighting the importance of Territorial Monitoring in order to foster assertive planning for Local Gov. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Results accomplished.









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Introducing Advanced Remote Sensing Techniques using High Resolution Satellite Imagery for operational use in Transportation Projects of the Brazilian Military Institute (IME) & DNIT.



Consultant & Lecturer. Implement the Operational use of Applied Remote Sensing Techniques to the Monitoring of Transport Engineering Projects, allowing for transparency, lower risk and assertive planning. 2. Implement the Operational use of Situational Analysis through Applied Remote Sensing for Highway Constructions especially works of art, through 3D satellite databases, especially for the Highway BR-163 in the Amazon Region; 3. Remote Sensing and GIS for environmental studies of highways. Mission planning and execution of mapping of the highway corridor / strip BR-101 Northeast (~400 km) from the city of Natal to the city of Palmares with a specialized helicopter – only alternative - due to almost constant cloud cover in the area. Operation under the cloud cover and even with rain. The flight was fundamental to plan the duplication of the carriageway of the highway and derived expropriations. Images were also used for the required environmental studies. In this way it was possible to map the highway in record time, lower the budget and still offer a quality product to solve the urgent requirements of the Brazilian Army. Certified as Lecturer Emeritus – Ministry of Defense – Brazilian Army/ Engineering & Construction Department. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading.









GeoCadaster - Innovative Rural Technical Cadaster in Brazil, for Land Regularization.

An innovative project with the methodology idealized by **UWC Consulting** in the year 2004 (at that time under the name of **UWP Engenharia**) for the Federal Government Agency INCRA to be carried out by an NGO - FUNDESA), under the Coordination of Eng. Ulf Walter Palme. Pilot Area was in the State of Pernambuco (Northeast of Brazil. Unfortunately, after 5 months, due to gross misconduct of the NGO and the Federal Government Agency, UWP Engenharia suspended activities extrajudicially, although having the unrestricted support of the State Government and the Rural Producers and Mayors in the region.

The methodology was idealized to solve a serious Land Regularization problem (frauds, etc.) very common in Brazil, bringing transparency, velocity to the whole Land Regularization procedures of over 4 million rural properties in Brazil. Results that were obtained in the short period of some months proved that the methodology was sound and possible, and resulted years later, after continuous hard work, resilience, persistence and marketing campaigns to clarify the advantages, eventually in the adoption of this Geocadaster methodology by many professional surveyors all over Brazil, to the point where it became the standard procedure nowadays. Example of an initial "gone wrong" Project that turned out to become a very well accepted standard, even by the Government.



e Tecnologia Espaciais



Development of Adjusted Cartographic and Vector Database of GIS Campinas for SANASA SA, Campinas - Brazil.

FOUNDATION FOR SPACE SCIENCE, APPLICATIONS AND TECHNOLOGY - FUNCATE - BRAZIL. <u>www.funcate.org.br</u>

Consultant and Responsible Expert. Final Client – SANASA / Local Gov. County of Campinas.

1. Generation of an Orthomosaic (cartographic database) for the county of Campinas (800 km²) derived from IKONOS 2008 high resolution imagery and compatible with the 1:2.000 scales, a DTM (Digital Terrain Model) derived from a World View I stereo pair imagery with final accuracy of 1.6 m and contour lines of 2.0 m, and an implemented geodetic network of 19 points inside the county mosaic database and over 30 points for the area of the DTM. 2. Adjustment of the distorted parcel (over 200,000 parcels) vector database to the new Orthomosaic. 3. Extraction of edification. 4. Generation of a 3D of the whole area of the DTM (1,300 km²). 5. Inserting all information in a GIS. 6. Generation of all the Technical documentation. 7. Generation of a new Orthomosaic with GEOEYE imagery from 2010 and updating of the vector database. 8. Comparison of 2008 and 2010 data focusing on the urban growth and environmental analysis. Innovative work over large area being much faster and cheaper than aero photogrammetric procedures and with comparable quality and accuracy. A good quality database for monitoring urban dynamics. Article on the quality of the 2008 Orthomosaic published in Geoinformatics – A High Resolution Orthomosaic in Brazil, July/Aug 2009 Volume 12. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Accomplishments exceeded client's expectation.





Remote Sensing Geocadastre & Land Use Mapping for the Agribusiness Chain - Linking Rural Production to Supermarkets, Industrial Restaurants, Fast Food Chains and other vertical markets in the greater São Paulo Metropolitan Area - Brazil.









RURAL UNION OF MOGI DAS CRUZES /SEBRAE - BRAZIL. www.sindicatoruralmc.com.br / www.sebrae.com.br

CTO at GEOVISO & Responsible Expert.

Pilot Program: Strengthening of the Productive Chain of Khaki, Nespera, Mushrooms and Vegetables in the Alto Tietê and São Paulo Metropolitan Areas, São Paulo, Brazil. Design, implementation and technical documentation of an innovative GIS System in 3D high resolution satellite images with the Geocadaster and land use map of 150 leading Rural Producers (in 1,600 ha) and 300 commercial establishments (Restaurants, Supermarkets, Industrial Cooking, Fast Food, etc.). Main objective of the system is bringing transparency and reliable trading opportunities between producers and the final destination of the perishable ag products, in an area around Metropolitan São Paulo with around 20,000 rural producers and over 50,000 commercial points for the ag products. The Program is looking for funding to set up a complete management system in the 3D GIS over the area with Sustainable Territorial Monitoring. Main Institutions that participate in this Program, besides the Rural Union are: SEBRAE (Brazilian Service of Support for Micro and Small Enterprises – Development Agent), APAS (Supermarket Association of the State of São Paulo), ABRASEL (Brazilian Bar & Restaurant Association), APHORTESP (Vegetables and Fruits Association of the State of São Paulo) and the Associations for Fruits, AFRUT and for Mushrooms, AFAT. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Successful team leading. Accomplishments exceeded client's expectation.



Advanced Remote Sensing Techniques for Operational Early Crop Disease (pre visual detection) in Brazilian Citrus Orchards for SYNGENTA.



Consultant & Responsible Expert. CTO at GEOVISO.

Development of an innovative Pilot Project using Applied Remote Sensing Techniques, for a Feasibility Study in crop monitoring. Confidential Results. The result of this Pilot Project allowed Syngenta to make an assertive decision regarding the different possibilities for the issues under investigation. Innovative ideas implemented and benefits generated. Delivery of quality work in time and within budget. Results Accomplished.



Development of Territorial Reference and Management System (GIS) - Water & Sanitation, for SANASA, Campinas - Brazil.



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SANASA – WATER & SEWAGE COLLECTION & TREATMENT SERVICES FOR THE COUNTY OF CAMPINAS - BRAZIL. <u>www.sanasa.com.br</u>

Coordinator for Territorial Management. Development of a GIS based Territorial Monitoring System. Development of new products for studies that incorporated environmental sustainability, assertive

planning. Innovative ideas implemented and benefits generated. Delivery of quality work in time. Successful team leading. Results Accomplished.

NIPPON KOEI

20

Mapping of 23 cities of Paraguay in the Program to Support the Strategic Planning and Institutional Development of the Pluvial Drainage Sector in Paraguay through NIPPON KOEI / NKLAC for the Ministry of Public Works and Transportation (MOPC); An Interamerican Development Bank (IDB) Project.





CONSORTIUM NIPPON KOEI – NIPPON KOEI LAC – NON-REFUNDABLE TECHNICAL COOPERATION ATN/JF-12342-PR MOPC – IDB NIPPON KOEI LATIN AMERICA & CARIBBEAN – NKLAC - PARAGUAY. <u>www.nklac.com</u>

OBRAS PÚBLICAS Y COMUNICACIONES

Certificate PDF

Final Client: República del Paraguay, Ministério de Obras Públicas y Comunicaciones. Cooperación Técnica no Reembolsable A TN/JF-1242, BID — Programa de Apoyo a la Planificación Estratégica y Desarrollo Institucional del Sector de Drenaje Pluvial en Paraguay.

Delivery of quality work in Cartography and GIS (Geographic Information System), in time and within budget. Results Accomplished

NIPPON KOEL

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Integral Water Resources Management Plan of the Bogota River Basin - Colombia, through INAR Asociados / NIPPON KOEI & NKLAC for Corporación Autonoma Regional (CAR) - Bogota - Colombia; A World Bank Project.



Certificate

CONSORTIUM NIPPON KOEI, NIPPON KOEI LAC & INAR ASOCIADOS, FOR CORPORACIÓN AUTONOMA REGIONAL DE CUNDINAMARCA - CAR - BOGOTÁ – COLÔMBIA. Contract 753-2015



Consultant.

of a GIS (Geographic Information System) for the Project. Delivery of quality work in time and within budget. Results Accomplished.

Generation of 3D Topography over 67,600 ha through LiDAR Full Wave Technology and Digital Orthophotos with densification of the Geodetic Network of

Plan de Manejo Integral del Recurso Hídrico en la Cuenca del Rio Bogotá – Agronomist & Remote Sensing Expert - Cartography and Soil Use Mapping. Establishment





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INOVOH PARAGUAY SA for MINISTRY OF PUBLIC WORKS -MOPC- PARAGUAY, through HELITACTICA SA.



the Pilcomayo River from Pozo Hondo to General Dias - Paraguay.



National Bid on the Generation of 3D Topography Assessment (LiDAR) of the Pilcomayo River Area comprising 67,000 ha. Orthophotos 5cm, DTM 50cm and Contour Lines of 25 cm (together with African Consulting Surveyors). Responsible Expert that generated the Final Technical Report TO MOPC.





Sustainable Territorial Management - International Course in Remote Sensing and GIS Systems - CRECTEALC / United Nations - Brazil. http://crectealc.org/







Localization into Portuguese of the Innovative Remote View (Electronic Light Table) software from Sensor Systems / OVERWATCH. www.textronsystems.com/products/remoteview-pro





Operational Open Skies IRIS Synthetic Aperture Radar Technology.



HUMANITARIAN PROGRAMS OF INFRASTRUCTURE PROJECTS FOR THE DEVELOPMENT OF PROGRESS AND PROSPERITY

2017-present

Some basic information about the programs. Further information can be found at www.inovoh.com.



Basic information about the program for the Republic of Paraguay can be found at www.jahupiparaguay.com or www.paraguayrise.com.





Panel Objectives

Humanitarian Program