

FELIX ORINA SIRUERI

CURRICULUM VITAE

JULY 2020

MR. FELIX ORINA SIRUERI

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E-mail: orinafelix@gmail.comLinkedIn: <https://ke.linkedin.com/in/felixorina>**PERSONAL DETAILS**

Nationality: Kenyan
Gender: Male
Marital Status: Married
Religion: Christian
Date of Birth: 26th December 1984

PROFESSIONAL PROFILE

Felix Orina is an innovative, assertive, skilled team player and a Geospatial enthusiast having hands-on experience spanning ten (10) years in Geoinformation Science (GIS), Surveying, Mapping, Geo-IT solutions, GIS mobile and web mapping applications development; remote sensing, design and development of enterprise GIS databases, digital and online mapping, 3D Geo-modeling among other Geospatial solutions. Felix possesses a MSc degree in Geoinformation Science from The University of Twente – ITC, The Netherlands and a BSc degree in Geospatial Engineering from The University of Nairobi, Kenya. Felix has actively been involved in numerous Geospatial projects in Kenya and Africa region at large. He has executed projects in various countries in Africa, particularly in Kenya, Rwanda, Tanzania, Somalia, South Sudan, Madagascar among others. Felix has wealthy of experience and skills having handled projects at National and county governments; Non-Governmental Organizations (NGOs); humanitarian sectors; water and energy utility industries; surveying and mapping; civil engineering and construction industries among others. Mr. Orina has also been involved in GIS and Mapping projects for Kenya National Highways Authority, Nyeri Water and Sanitation company; World Vision Kenya, Mumias Sugar company, Rwanda Environmental Management Authority (REMA), Rural Electrification Authority etc. Whilst studying in the Netherlands for his Msc. degree from the year 2013 to 2015, Felix worked as a part-time GIS Analyst at the Dutch Kadaster for a period of Six (6) Months. Locally, Mr. Orina has also been actively participating in development of smart GIS mobile and web mapping applications using latest geo-technologies such as GIS Cloud, EpiCollect5, Survey123, ArcGIS online, GeoServer, PostGIS and leaflets. Presently, Felix is a GIS Manager at KeNHA. He champions the fully implementation of GIS within the organization. Notably, one of his major accomplishments at Orbital is overseeing the mapping and analysis of 9,000 PEPFAR sites in Kenya (www.orbital.co.ke:82). To augment the delivery of Geospatial solutions, Mr. Orina has immensely participated in offering Geoinformation training and capacity development that leverages on Commercial-Off-The-Shelf (COTS) and Open Source Geospatial Software. Presently, Felix is a Lead Consultant at Orbital Africa Ltd. He intends to continue developing his career and advance his skills in the realm of Geospatial Science and be more productive at Orbital Africa and KeNHA.

PROFESSIONAL & CAREER OBJECTIVE

To be part of a company or an organization that fosters competency, creativity, innovation and professional responsibility in order to enhance my career development through learning, acquisition of vast skills, experience as well as expertise in the field of Geospatial Engineering.

EDUCATION BACKGROUND

University of Nairobi Nairobi, Kenya Doctorate Degree: <i>PhD in Geographical Information Systems (GIS)</i>	Sep 2020 – Jun 2023
University of Twente Enschede, The Netherlands Master's degree: <i>MSc. Geoinformation Science (GIS)</i>	Sep 2013 – Mar 2015
University of Nairobi Nairobi, Kenya Bachelor's Degree: <i>BSc. Geospatial Engineering (1st Class Hons)</i>	Nov 2004 – Jun 2009
Nyambaria High School Nyamira, Kenya High School Education: <i>KCSE Certificate (Mean Grade A-)</i>	Feb 1999 – Nov 2002

PROFESSIONAL TRAINING

Maptech Consultants Ltd Nairobi, Kenya Certificate in Drone Mapping and Image Processing	Feb – Mar 2020
Regional Centre for Mapping of Recourses for Development Nairobi, Kenya Certificate in SQL and RDBMS Database Systems	May – Jun 2019
Udemy Online Training Certificate in Web Design and Development	Oct – Jan 2018
Kenya School of Government (KSG) Nairobi, Kenya Certificate in Senior Management Course	Mar – Apr 2018
Udemy Online Training Certificate in Web Mapping with Leaflet JS Libraries	Sep – Dec 2017
Kenya School of Government (KSG) Nairobi, Kenya Certificate in Project Planning and Management	May – Jun 2017
The World Bank E-Institute Online Training Certificate in Integrated Urban Transport Planning	Apr – Jun 2014
The World Bank E-Institute Online Training Certificate in Street Addressing & Management of Cities	Oct – Dec 2013
Orbital Africa Ltd. Nairobi, Kenya Certificate in Fundamentals of GIS and Mapping	Feb – May 2013
Oakar Services Ltd. Nairobi, Kenya Certificate in GIS Web/Online Mapping Course	Aug – Sep 2011

TECHNICAL AND GEO-ITC SKILLS

Geographical Information Systems (GIS): Desktop GIS (ArcGIS/Pro); GIS for Mobile; GIS for the Web/Online and Cloud platforms; Advanced GIS Analysis and workflows; Cartographic Map Design and production etc.

GIS Programming: ArcPython; Javascript; Cascading Style Sheets (CSS); (HTML5); Google Earth (KML/KMZ); Leaflet JS; APIs for Mapbox, Google Maps, Here and OpenLayers; front-end and back-end web development.

Mobile Mapping: Esri ArcPad, Survey123, Collector for GIS, Workforce for ArcGIS; Epicollect5; Open Data Kit (ODK); Open Map Kit (OMK); CAPI; SurveyCTO; Mobile Mapper Field; GIS Cloud apps.

3D Mapping and Modeling: Google Earth Pro; Esri City Engine; AutoCAD Civil 3D; SketchUp; LiDAR 3D for ArcGIS; QGIS 3D; ArcGIS 3D Analyst etc. I also process skills in 3D web mapping using ArcGIS online.

GIS Web and Online Mapping: GIS for Server; Opegeo Suite for cloud; MapServer; GeoServer; GeoExplorer; GeoWebCache; OpenLayers APIs; GIS Cloud Computing and deployment of web apps in ArcGIS online.

Remote Sensing & Drone Mapping: High-resolution drone and satellite image analysis as well as processing using software e.g. ERDAS Imagine; LPS; Agisoft; Pix4D; Drone Deploy; ArcGIS; Global Mapper; ENVI etc.

GIS and Spatial Databases: MS Access; PostgreSQL, PostGIS; Multi-user Geodatabases e.g. ArcSDE; File and Personal GIS databases, Oracle Spatial; Mongo DB; Spatial Lite and Microsoft SQL Server.

M&E of Projects: Skills in integration of M&E data with GIS Analysis; Use of M&E mobile apps/tools in Road Construction Progress Reporting; M&E IMS; GIS visualization of M&E data; Use of MS Project Suite.

Geo-ICT Skills: Skills in Virtual Private Servers (VPS); GIS web maps design and development using HTML, CSS, Bootstrap and Javascript etc.; HTTP/HTTPS/SSL and IP configurations; DNS Manager (MX, A and TXT records creation); domain and sub-domain mapping to IP addresses; Cloud Computing (e.g. SaaS, PaaS etc.).

PROFESSIONAL & WORK EXPERIENCE (10+ Years)

Orbital Africa | Nairobi, Kenya
Managing Director and CEO

Apr 2011 – To Date

Development of Geospatial proposals for various clients; Geospatial projects acquisition, negotiations, planning, management, implementation and maintenance; Oversees the day-to-day operations of the company in terms of sound utilization of resources e.g. human, financial, time etc. for optimal service delivery to clients; Ensures Quality Control (QC) and Quality Assurance (QA) is maintained as well as timely delivery of clients' projects; Oversees topographical, engineering and land surveys; drone mapping and image processing, GIS mapping, creation of GIS databases for various projects in the civil engineering and construction industry; utility industry; humanitarian industry, national and county governments among others. Actively involved in offering geoinformation training services to clients in Kenya and Africa (e.g. UNICEF, Rwanda; University of Copperbelt, Zambia; UNHCR, Rwanda etc.); participates in design and development of GIS mobile and web applications using 4D's approach i.e. **Design, Develop, Demonstrate and Deploy** in GIS Portal (www.geo.orbital.co.ke).

Kenya National Highways Authority | Nairobi, Kenya
Directorate of Highway Planning and Design
Designation: GIS Manager

Jun 2016 – To Date

As a GIS Team Leader, I spearhead and oversee fully implementation of Geographical Information System (GIS) within the Authority; supervise and coordinate all the GIS field mapping including data collection activities using smart GIS/GPS apps as well as reporting. I oversee the development of Authority's GIS Implementation Framework spanning 5 years; champions the development and updating of Authority's GIS manual; liaising with other directorates such: [1] *Road Asset and Corridor Management (RACM)* – To adopt and integrate GIS with Annual Roads Inventory and condition Survey (ARICS) and DRIMS platform; [2] *Directorate of Development (DD)* – To develop and deploy GIS operation dashboard for reporting the progress of highways construction projects in Kenya. Fully participates in the development of GIS mobile and web applications for the Authority e.g. land acquisition and land assets database, corridor mapping, road structures and furniture mapping, Bridge Information Management System (BIMS); development of prototype road incidents reporting platform; prepares the survey annual work plans; evaluation and certification of works submitted by survey and mapping consultants; Prepares the periodic reports for the survey section; Prepares the GIS training workplan for the Authority; Supervises the work of survey consultants engaged by the Authority; Participates in the preparation of GIS data sharing workflows and protocols within the Authority. Liaising with ICT department and other technical departments on matters related to GIS software installation, training, licensing, fine-tuning, and upgrading; troubleshooting and overall technical support.

Dutch Kadaster | Apeldoorn, The Netherlands
Geospatial Analyst Intern

Jun 2014 – Nov 2014

Participated in collection and registration of administrative and spatial data on land property and the rights involved; Performed checks on data integrity and did corrections using topological rules such as overlaps, gaps, intersection of parcel polygons; Carried out GIS mapping and field data collection; GIS analysis and creation of Netherlands Property database and maps for Apeldoorn municipality; Corrected the topological errors inherent in the GIS data such as population, provincial and town datasets; participated in field studies on resilient cities e.g. The Hague, Rotterdam and Amsterdam cities; Learnt how different cities such as Amsterdam and Rotterdam were reclaimed from the sea as well as the construction and the role of dykes in Dutch cities.

Kisii County Government | Kisii, Kenya
GIS Consultant/Surveyor

Jan 2013 – Jul 2013

Performed tasks such as mapping and re-establishment of urban boundaries; Performed the mapping of encroached public land within Kisii town and populated the area thereof; Conducted field data collection using mobile apps such as GIS cloud app, EpiCollect5, ODK, survey123 etc. and synchronized the collected field data with a GIS web/cloud portal; undertook mapping of buildings that encroached on public land e.g. roads; prepared town spatial and development plans; Studied town population and current land use through field surveys, field investigations and other research methods; used the computer software e.g. AutoCAD and ArcGIS to analyse urban information, map land areas, project costs and predict future trends; Did mutation surveys and amalgamation; Executed establishment of boundary beacons; solving land related conflicts such as boundary disputes; Prepared technical county reports regarding locations of different urban infrastructure etc.

Nairobi City County | Nairobi, Kenya
Consultant Surveyor

Sep 2012 – Dec 2012

Assessed planning applications and did monitoring outcomes of the city plans as necessary; Conducted research and designed planning policies to guide development; Researched and analysed spatial data which helped inform the strategic developments, such as increases in affordable housing provision; used information technology systems such as CAD and GIS in the design and creation of city spatial and land use plans; Familiarized with up-to-date legislation associated with city land use planning, the Land Act of 2012, Land Registration Act etc.; Participated in the promotion of environmental education and awareness; Helped disadvantaged groups express their opinions about surveying issues and proposals; visited sites to assess the effects of proposals on land development and environmental impacts; Scheduled resources to meet planning targets; Prepared reports, consulted with stakeholders and other professionals, such as city planners and land valuers.

World Vision, Kenya | Garissa, Kenya
GIS Mapping Consultant

Jul 2012 – Sep 2012

Participated in the preparation of GIS subtypes, domains, schemas and geodatabases for all features that were mapped including schools, health centres, boreholes, market centres, water kiosks, migration routes, settlement villages in Garba Tulla and Laisamis in Samburu County; Participated in offering GIS training services to World Vision staff members on field data collection using Trimble GPS and ArcPad software; Participated in field data collection and mapping; Did the creation of cartographic maps (both softcopy and hardcopy) of all mapped features in all the target divisions; Created the web maps using both ArcGIS Server and ArcGIS online thus availing them to the World Vision intranet for sharing and dissemination; offered technical support in areas of GIS server software updates and upgrades, troubleshooting and quality control measures; Carried out training and capacity building to the World Vision personnel for the purposes of field data collection using GPS; Analysed the collected data and created the maps (both in A0, A1 and A2 sizes); Provided detailed documentation and reports of the GIS activities/tasks undertaken during project work.

Oakar Services Limited | Nairobi, Kenya
Head GIS Section

Sep 2009 – Jul 2012

Supervised GIS assistants; Coordinated various company projects and report writing; Prepared and delivered customized training courses on GIS, GPS and remote sensing; Participated in GIS web application development, data acquisition and documentation; Organized and maintained the geospatial datasets, metadata and its documentation; Prepared the technical proposals documents, project acquisition as well as management; Did satellite imagery analysis (Landsat, GeoEye, RapidEye, IKONOS, KOMPSAT and QuickBird); Performed change detection analysis tasks for various projects that I undertook; Did field data collection using handheld and geodetic GPS, levels and total stations; advanced GIS analysis and creation of cartographic maps for various projects undertaken; Developed the geospatial enterprise solutions using ArcGIS server and ERDAS Apollo; Actively participated in professional seminars, exhibitions, conferences as well as workshops; Produced digital web maps; Developed the multiuser geodatabases and web-based applications using ArcGIS server, ArcObjects and ArcGIS APIs, .KML; geoprocessing using python; Installed, configured and licensed enterprise databases systems i.e. SQL server, Spatialite and PostgreSQL/PostGIS for various clients.

Advanced Geospatial Solutions (AGS) | Nairobi, Kenya
GIS Field Officer

Jun 2009 – Sep 2009

Performed GIS data collection on cotton farms using handheld GPS; mapping of cotton farms using QuickBird satellite imagery, creation of GIS database of farms; carried out spatial information storage, analysis and presentation using maps and infographs; used a range of GPS tools in the field to capture the location of 'assets' such as bridges, street lights, road barriers and flood defenses; Undertook desk-based data capture (digitizing) to convert paper maps to GIS datasets to, for example, record the location of telecoms cables or water pipelines from original maps; Created and maintained the structures necessary for GIS data storage; developed tools for loading/transferring GIS data between different systems; manipulated, analysed and presented geographical information by creating programs to convert GIS information from one format to another; Powerline route surveys and mapping, Wayleave acquisition and signing of consents by the Project Affected Persons (PAPs). He also ensured that the precise location of electricity poles during pegging exercise was accomplished; Used wide range of software and hardware tools including Trimble Juno SB and Garmin GPS; Microsoft Access Database 2007; ArcGIS 9.3 to accomplish the tasks.

Ministry of Lands, Survey of Kenya | Nairobi, Kenya
Geospatial Analyst Intern

Jul 2008 – Nov 2008

Scanned and did on-screen digitization of survey plans and registry index maps; Created and maintained the geodatabases and validation thereof; Developed the digital topographical maps using Esri ArcGIS 10 software and R2V; Did adjudication and general boundary surveys; Authenticated the survey plans and deed plans prior to issuance of land titles; Scanned and digitized features from topographical maps (scale 1:50,000) such as rivers, contours, roads and forests; cadastral work, deed plans verification and authentication, field work data collection using Garmin GPS; Cartographic map creation and compilation; Determined boundary lines, tracing of government survey lines, re-established and marked survey lines; Established and maintained an automated land information system (LIS) for mapping data and digital land boundary records; Carried out quality control survey; topographical, engineering and cadastral surveys; Created land survey technical reports for various projects.

Geo-Acre Surveys Limited | Nairobi, Kenya
Land Surveyor Intern

Aug 2007 – Nov 2007

Carried out on-screen digitization of survey plans and registry index maps; Designed and developed the GIS databases and validation thereof; Developed the digital topographical maps using Esri ArcGIS 10 software and R2V; Did adjudication and general and fixed boundary surveys; Authenticated the survey plans and deed plans for various clients prior to issuance of land titles and leases; Scanned and digitized features from topographical maps such as rivers, contours, roads and forests; cadastral work, deed plans authentication and verification, field work data collection using Garmin GPS; Updated topo maps with recent high resolution satellite images; Performed cartographic map design, creation and compilation; Determined boundary lines, tracing of government survey lines, re-established and marked survey lines; Established and maintained an automated Geographical Information System (GIS) for mapping data and digital land/parcel boundary records with acreage, owner details, registration blocks etc.; Carried out quality control, topographical, engineering, mutation and cadastral surveys; developed land survey and GIS technical reports for various Surveying as well as mapping projects.

PROJECTS AND CONSULTANCIES

Project Duration, Firm and Location	Project Name Position Held Relevant Technical and Management Experience
Apr 2020 – May 2020 Location: Kirinyaga Firm: KeNHA	<p>Surveyor: Control and Topo Survey of 100 Km Makutano – Marua (A2) Highway</p> <p>Horizontal and vertical controls static survey; traversing and levelling; topo survey of the road; underground utility survey using GPR; cadastral survey; land acquisition and creation of a GIS database; preparation of PAPs/RAPs maps as well as reports; topographical map design and production; project management and reporting.</p> <p><i>Software & Hardware:</i> Stonex GNSS; Total Station; Auto Level; ArcGIS & AutoCAD</p>
Feb 2020 – Mar 2020 Location: Meru Firm: Orbital Africa	<p>Drone Mapping Consultant: Mt. Kenya Forest Species Mapping & Illegal Logging</p> <p>Identification and recording of GPS coordinates of samples (sites) within the forest where illegal logging has taken place; drone mapping using Phantom 4 Pro in the identified sites; image processing in Pix4D and drone deploy (creation of orthomosaic, point cloud, 3D models, DEMs, DSMs and DTMs); supervised image classification; upload of image into GIS Portal; map design, production & reporting.</p> <p><i>Software & Hardware:</i> Garmin GPS; Phantom 4 Pro Drone; HP Laptop; ArcGIS and QGIS Software; DJI Go; Agisoft (Desktop); Pix4D and DroneDeploy (SaaS/Cloud).</p>
Nov 2019 – Ongoing Location: Malindi Firm: Orbital Africa	<p>Lead Surveyor: Topo and Engineering Survey for Construction of Solar Power Plant</p> <p>Establishment of local GCPs and BMs using GNSS; topographical and engineering survey works; levelling and computation of OGL levels; setting-out of solar panel structure columns, proposed solar power site, computation of volumes, alignments etc.; drafting cross-sectional and longitudinal sections, computations and reporting.</p> <p><i>Software & Hardware:</i> Stonex GNSS; Total Station; Auto Level & AutoCAD Civil 3D</p>
Sep 2019 – Ongoing Location: Naivasha Firm: Orbital Africa	<p>Lead Surveyor: Engineering Survey and Setting-out of Winery and Resort</p> <p>Project entitled 'Leleshwa Resort and Winery' entailed establishment of GCPs for topo & eng. survey, levelling works; setting out utilities and infrastructure e.g. roads, powerlines, building structures, water pipelines, sewer etc.; computations of volumes, CUT & FILL etc.; generation of topo maps etc.</p> <p><i>Software & Hardware:</i> GNSS; Total Station; Auto Level and AutoCAD Civil 3D</p>
May 2019 – Jun 2020 Location: Meru Firm: Orbital Africa	<p>Surveyor: Bathymetric and Topo Survey for Construction of Hydro Power Plant</p> <p>GCPs establishment; topo and Bathymetric survey using GNSS; levelling; computing OGL levels for hydro power structures, rivers, proposed hydropower generation site, spot heights, etc.; topographical maps of scale 1:1,000 were also generated; maps were used for planning of ideal location of water intake, invert levels; penstock routes, new power house, distribution network among other hydro structures.</p> <p><i>Software & Hardware:</i> GNSS; Total Station; Drone/UAV and AutoCAD Civil 3D</p>

<p>Feb 2019 – Ongoing Location: Murang'a & Kirinyaga Firm: Orbital Africa</p>	<p>Surveyor: Topo and Bathymetric Survey for Construction of Hydro Power Plant</p> <p>Establishment of local GCPs; topographical & Bathymetric survey, levelling and computing of OGL levels for ground structures, rivers, proposed hydropower generation site, spot heights, etc.; topographical maps of scale 1:500 were also generated which were used for planning of ideal location of water intake, invert levels; penstock routes, new power house, distribution network among others.</p> <p><i>Software & Hardware:</i> GNSS; Total Station; Auto Level and AutoCAD Civil 3D</p>
<p>Dec 2016 – May 2017 Location: Mombasa Firm: KeNHA</p>	<p>GIS Projects Manager: KeNHA – Road Construction Projects Reporting using GIS</p> <p>Conducted GIS mapping exercise on Bachuma Gate-Maji Ya Chumvi Road (Section of A8); used EpiCollect app to map road structures such as the culverts, bridges, signage, road construction progress, uploaded the data to KeNHA GIS portal and created GIS Operation dashboard; created the statistical and analysis reports.</p> <p><i>Software & Hardware:</i> GIS Portal and Server software; EpiCollect5 and GPS devices.</p>
<p>Jan 2016 – Feb 2016 Location: Thika Firm: Orbital Africa</p>	<p>GIS Technical Advisor: Kiambu County – Development of Land Information System</p> <p>Scanning of survey plans and Registry Index Maps (RIMs); Georeferencing; digitizing of parcel boundaries; data quality control; database and LIS development.</p> <p><i>Software & Hardware:</i> Handheld GPS, Total station, Global Mapper 17 and ArcGIS</p>
<p>Oct 2015 – Dec 2015 Location: Kitengela Firm: Orbital Africa</p>	<p>GIS & Spatial Planning Expert: Kitengela Town Project – Kajiado County Govt.</p> <p>Field data collection using GPS; survey and mapping; data capture (buildings, roads, Poles) from satellite imagery for 2000, 2005, 2010 and 2015. Developed models used in analysing urban growth trends of the town. Project planning and management.</p> <p><i>Software & Hardware:</i> Garmin GPS; ArcGIS 10.3, ERDAS Imagine and Google Earth.</p>
<p>Aug 2015 – Sep 2015 Location: Nairobi Firm: Orbital Africa</p>	<p>GIS and Remote Sensing Trainer: Peman Consultants Ltd – GIS Training Services</p> <p>Training on Introduction and Fundamentals of GIS; Introduction to Remote Sensing training; Creation of GIS databases; web and online mapping training; Introduction to ENVI and ERDAS imagine; Mobile mapping using GPS and Mobile apps.</p> <p><i>Software & Hardware:</i> Garmin GPS; ArcGIS; ERDAS; ENVI; GIS Cloud apps.</p>
<p>Mar 2013 – Jul 2015 Location: Kisumu Firm: Orbital Africa</p>	<p>Projects Surveyor: Rural Electrification Authority Project – Powerline Route Survey</p> <p>Acquisition of Registry Index Maps (RIMs); Georeferencing and digitizing of RIMs, Identification of Project Affected Persons (PAPs); Signing of Consents by PAPs; Performed powerline route surveys in Kisumu County using handheld GPS, scanned RIMs, did digitizing, powerline route design in AutoCAD, wayleave acquisition, obtaining consents from affected persons, submission of CAD drawings and datasets as well as powerline route pegging at defined intervals.</p> <p><i>Software & Hardware:</i> Garmin GPS; MS Office; HP Scanner; AutoCAD and ArcGIS.</p>

<p>Feb 2013 – Mar 2013 Location: Madagascar Firm: Orbital Africa</p>	<p>GIS Trainer: Training on the GIS AspMap based on .NET and Visual Studio</p> <p>A 10-day training on the GIS AspMap in Antananarivo, Madagascar to 20 Staff from Centre for Geoinformatics Application in Rural Development (CGARD).</p> <p><i>Software & Hardware:</i> GIS AspMap; Visual Studio 2018; Notepad ++; Win server</p>
<p>Jul 2012 – Nov 2012 Location: Lamu Firm: Orbital Africa</p>	<p>Field Surveyor: Setting-out The Kizingitini and Ndau sea walls – Lamu County Project</p> <p>Site inspection; setting out and taking OGL cross section based on agreed alignments; used Leica digital level; Did the staking out; alignments were set out every 25m with wooden pegs; concreted 2 beacons at every corner of the wall for reference later.</p> <p><i>Software & Hardware:</i> Leica digital level and staff; MS Office; Surfer 11 and AutoCAD</p>
<p>Apr 2012 – May 2012 Location: Nairobi Firm: Oakar Services</p>	<p>GIS Project Trainer: Survey of Kenya Project – Supply Photogrammetric Software</p> <p>Delivered a Digital Photogrammetric Workstation (DPW) including GIS and LPS Software; conducted GIS, ERDAS and LPS training to 12 SoK staff members.</p> <p><i>Software & Hardware:</i> DPW; 3D Mouse; 3D specs; ArcGIS; MS Office; LPS & ERDAS.</p>
<p>Feb 2012 – Apr 2012 Location: Kigali, RW Firm: Oakar Services</p>	<p>GIS & Remote Sensing Instructor: Rwanda Environmental Management Authority</p> <p>ERDAS Training to 12 REMA staff: Introduction to ERDAS Imagine 2010; Supervised and unsupervised classification; mosaicking images; orthophoto generation etc.</p> <p><i>Software & Hardware:</i> ERDAS Imagine and Leica Photogrammetry Suite (LPS).</p>
<p>Jun 2011 – Nov 2011 Location: Nyeri Firm: Oakar Services</p>	<p>Land Surveyor and GIS Specialist: Nyeri Water and Sanitation Company Project</p> <p>Performed field data collection (location of customers, water meters, and manholes). Scanned the PIDs, RIMs and Survey Plans; digitized and created of databases; linked the billing database and the GIS database; did map design and creation.</p> <p><i>Software & Hardware:</i> Trimble GPS; ArcGIS; ArcGIS Server; SDE and MS Office suite.</p>
<p>Jan 2011 – Mar 2011 Location: Limuru Firm: Oakar Services</p>	<p>Field Surveyor: Topographical Survey of Boma Road in Limuru, Kiambu County</p> <p>Field data collection and detail survey on Boma road using Nikon total stations and OmniSTAR GPS; Downloaded data into AutoCAD, did road design and setting out.</p> <p><i>Software & Hardware:</i> OmniSTAR GNSS; Nikon Total Station and AutoCAD 2010.</p>
<p>Jan 2010 – May 2010 Location: Kakamega Firm: Oakar Services</p>	<p>GIS Analyst and Surveyor: West Kenya Sugar Project – Mapping Sugarcanes Farms</p> <p>Creation of land use/land cover maps; mapping of sugarcane farms using handheld Garmin GPS; creation of GIS web-based mapping applications.</p> <p><i>Software & Hardware:</i> Garmin GPS; ERDAS Imagine; ArcGIS Server and Online.</p>
<p>Jun 2009 – Sep 2009 Location: Kabarnet Firm: AGS</p>	<p>GIS Assistant: Kerio Valley Cotton GIS Mapping and Database Development Project</p> <p>Field data collection on cotton farms using Garmin GPS; mapping of cotton farms boundaries using QuickBird satellite imagery, creation of GIS database of farms.</p> <p><i>Software & Hardware:</i> Trimble & Garmin GPS; MS Access Database and ArcGIS 9.3.</p>

RESEARCH AND PUBLICATIONS

No.	Name of Research or Publication	Description & Details of Research or Publication
1.	Drone Mapping of Illegal Logging Sites and Tree Species in Mt. Kenya Forest (2020)	Link: https://bit.ly/3en3Caq
2.	Topographical Surveying using Unmanned Aerial Systems/Drones (2019)	Link: https://bit.ly/3hPZFwP
3.	Spatial Patterns of slums: Comparing African and Asian cities (2017)	Link: https://bit.ly/3emwpvv
4.	Comparing patterns of informal settlements between Nairobi and Dar es Salaam (2015)	Link: https://goo.gl/M3zQSi
5.	Mapping and Analyzing Urban Development Trends in Kitengela Town (2015)	Link: https://goo.gl/XCqBNo
6.	Development of a web-based Land Information System {LIS} for Buruburu Estate (2014)	Link: https://goo.gl/LB8Qfy
7.	Creation of a Digital Cadastral Database to Map Road Encroachments in Buruburu (2009)	Link: https://bit.ly/2NdC6Ae

GIS WEB APPLICATIONS

No.	Name of Application	Description and Details of the Application
1.	GIS Mapping and Analysis of PEPFAR Health Facilities in Kenya	Link: http://www.orbital.co.ke:82/
2.	Spatial & Land use Planning in Kitengela Town, Kajiado County	Link: https://goo.gl/SqoQiR
3.	Design & Development of Orbital Africa's Open GIS Portal	Link: http://geo.orbital.co.ke
4.	Creation of a 3D Digital Surface Model using Drone Overlapping Images	Link: https://bit.ly/2zVJZY4
5.	Development of a GIS-Based incidents Reporting Platform	Link: www.orbital.co.ke/incidents

LEADERSHIP ROLES

2020: Technical Committee Member, Development of Geospatial ISO Standards (KEBS/TC 168)

2018: GIS Manager, Kenya National highways Authority (KeNHA).

2011: Team Leader and Principal Consultant, Orbital Africa Limited.

2007: Secretary General, Kitutu Masaba Students' Association (KIMASA), University of Nairobi.

2001: The Chairman, Journalism Club, Nyambaria High School.

AWARDS AND HONORS

1. Awarded a Dutch Government Scholarship (Nuffic) for Masters Studies in The Netherlands in the year 2013.
2. Emerged with the 2nd overall Best MSc. Research Thesis at University of Twente, The Netherlands in 2015.
3. Emerged the 2nd best final year student with 1st class honors, Geospatial Engineering, Class of 2009, UoN.

PROFESSIONAL SOCIETIES

1. Full Member (MISK) - GIS Chapter, Institution of Surveyors of Kenya {ISK/A/LS/12};
2. Member, Geospatial Advocacy Kenya (GAK);
3. Member, Geospatial Society of Kenya (GSK);
4. Member, Global Spatial Data Infrastructure (GSDI);
5. Member, GIS Global Development Group (GGDG).

WORKSHOPS AND CONFERENCES

1. Annual Conference for Institution of Surveyors of Kenya held in Diani, Mombasa on 8th to 10th May 2018
2. Esri's GIS Users - Eastern Africa GIS Users Conference Held in Kisumu City on 2nd to 4th November 2016.
3. The Role of GIS and remote Sensing in Managing County Resources held at Kilifi County on February 2016.
4. The ERDAS' Eastern Africa user conference held at the Laico Regency Hotel on July 2011 in Nairobi, Kenya
5. Institution of Surveyors of Kenya annual conference held at Pan Africa Hotel on November 2010, Nairobi.

MAJOR ACCOMPLISHMENTS

1. Project Manager: Mapping & Analysis of Health Facilities in Kenya's 47 Counties – Nov 2017 to May 2018.
2. Developed a Model to Predict Growth of Kawangware Slums in Nairobi from 2000 to 2030 – May 2012.

INTERESTS AND HOBBIES

Interests: - Enthusiast in GIS, Remote Sensing and emerging technologies in ICT such as cloud computing;
 - Professional seminars, forum, exhibitions, workshops and conferences on entrepreneurship;
 - General research and reading articles, magazines, publications as well as inspirational books.

Hobbies: - Watching documentaries on space science, technology, environment and future cities;
 - Playing indoor games e.g. scrabble, chess, pool and darts; also watching and playing soccer;
 - Travelling for leisure, exploring new places and adventure; both locally and internationally.

LANGUAGES

LANGUAGE	SPEAKING	READING	WRITING
1. English	Excellent	Excellent	Excellent
2. Swahili	Excellent	Excellent	Excellent
3. French	Fair	Fair	Fair

COUNTRIES OF WORK EXPERIENCE

Country Name	Details of Assignment	Dates
1. South Sudan	Topo survey services for the USA Embassy premises in Juba city	Feb-May 2019
2. Somalia	Total station and Civil 3D training to 20 NIS Staff in Mogadishu	Oct-Dec 2018
3. Madagascar	Trained 20 CGARD Staff on AspMap and QGIS in Antananarivo	Feb-Mar 2018
4. Tanzania	Did Research on Spatial Patterns of Slums in Dar es Salaam City	Sept-Oct 2014
5. Netherlands	GIS Attaché at Municipality of Twente During MSc. Studies	Mar-Aug 2014
6. Rwanda	Trained Rwanda Environmental staff (REMA) on ERDAS Imagine	Feb-Apr 2013

REFEREES

Academic Referees

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CERTIFICATION

I, **Felix Orina Sirueri**, the undersigned, certify that to the best of my knowledge and belief that the details given above are true and correctly describe me, my academic qualification and work experience.

Signature:



Date: 27th June 2020

Place: Nairobi, Kenya