

MARTIN MORELL

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SUMMARY

General: Over 25 years' experience in telecom and ICT, particularly in emerging and developing economies. Extensive familiarity with infrastructure and system planning, procurement and implementation; deployment of alternative infrastructures; rural telecom and Universal Service; Internet development; policy, legal and regulatory issues; sector liberalization; and telecom/ICT sector research and demand forecasting. Direct involvement with capacity building / training on behalf of telecom regulatory and policy bodies.

Overseas Work Experience: North Africa (Morocco, Algeria, Tunisia); Sub-Saharan Africa (Kenya, South Africa, Tanzania, Uganda); Middle East (Jordan, Palestinian Territories); Western Europe; Central/Eastern Europe (Poland, Hungary, Bulgaria, Romania, Serbia, Montenegro, Kosovo, Albania, Moldova, Ukraine, Turkey); Russia; Caucasus (Georgia, Armenia); Central Asia (Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan); Southeast Asia (Indonesia, Malaysia, Thailand); Central and South America (Honduras, El Salvador, Panama, Ecuador, Chile, Peru, Brazil)

Funding Agency Experience: EBRD, World Bank, USTDA, USAID, OPIC

Foreign Language Proficiency: Russian, French, Spanish, Italian (all very fluent reading and comprehension ability; fluent speaking ability)

SELECTED PROJECTS

ICT Infrastructure

Kenya and Tanzania: In-Country Due Diligence for Prospective Investment in Regional Triple-Play Operator

Part of team representing the Lender in a comprehensive due diligence (technical, commercial, legal/regulatory, financial) for a prospective \$90 million investment in regional triple-play and DTH operator seeking to expand service offerings across East Africa.

- carried out extensive in-country technical review of operator's existing infrastructure and related operations (headend, outside plant, NOC, Call Centers, walk-in centers, OSS/BSS, training facilities)
- reviewed build-out and future expansion plans, subscriber and revenue assumptions in light of available market and socio-economic/demographic data
- interviewed wide range of company technical and commercial personnel, as well as representatives of established telecom/ICT companies, regulatory/policy bodies, other sector actors

Republic of Georgia: Advisory Services to Silknet (ex United Telecom Group)

Chief Technical and Market Survey Expert as part of a multi-disciplinary team providing support to Silknet (ex United Telecom Group) of Georgia, the fixed-line incumbent operator, which was seeking financing for expansion of its advanced network platforms (xDSL, CDMA and IPTV).

- Conducted interviews with a wide range of actors in the ICT sector, including fixed-line and wireless operators, ISPs, representatives of the regulator GNCC and other government agencies, NGOs, and end users
- Prepared a detailed survey of the sector and its fixed-line, wireless and Internet sub-sectors
- Carried out detailed supply-side analysis of Silknet's fixed-line, xDSL and CDMA infrastructure, currently being correlated with the results of demand analysis and modeling
- Participated in "bottom-up" survey of telecom/Internet usage in a sample of 258 SMEs (first of its kind in Georgia); provided training, in Russian, for survey teams
- Participated in three-day "walk-down" (preliminary survey for costing/budgeting purposes) of a new alternative fiber-optic cable route between Tbilisi and Batumi

Morocco: Office National de l'Electricité (ONE) Commercial Telecom Initiative

Part of multi-disciplinary team that advised ONE on large-scale deployment of fiber optic transmission systems, with view to entry into commercial telecom marketplace.

- Supervised and coordinated extensive in-country research of demand for telecom and Internet-related services; developed survey instruments; trained survey research teams
- Analyzed technical, economic and regulatory aspects of various fixed and wireless last-mile options, including broadband PLC (power line communications via the electrical distribution network)
- Estimated network build-out requirements under various commercialization scenarios
- Collaborated with US-based and local legal counsel, and with national telecom regulator ANRT, on various aspects of legal/regulatory diligence (coverage and service requirements, interconnection issues, potential constraints on ONE telecom market entry)

Algeria/Morocco/Tunisia: Electric Power Management and Communications Plan

Part of team that undertook study funded by U.S. Trade and Development Agency (USTDA) to evaluate economic viability of interconnections among the electric utilities of Algeria, Morocco and Tunisia (SONELGAZ, ONE and STEG respectively) under the general coordination of the Algeria-based Comité Maghrébin de l'Electricité (COMELEC), to promote increased and more reliable power exchange among these utilities.

- Assisted with development of a Management and Investment Plan for expansion of interconnected power transmission networks, which COMELEC could use in dealing with lending institutions, sovereign entities and sources of private equity
- Reviewed SONELGAZ plans for implementation of fiber-optic-based network to be used as a basis for centralized dispatch and to support SCADA/EMS applications; estimated size of necessary investments under various deployment scenarios

Honduras: Empresa Nacional de Energía Eléctrica (ENEE) Fiber-Optic Network

Assisted ENEE to develop a comprehensive plan for implementation of a national alternative fiber-optic network infrastructure.

- Analyzed technical and commercial feasibility of planned network based on extensive in-country market research, technical and regulatory reviews and line of business analysis
- Advised ENEE on technical, commercial and regulatory issues related to integration of planned network into broader regional initiatives (e.g., Mesoamerican Information Highway, Honduran and regional e-government plans)
- Negotiated with telecom regulatory agency (CONATEL) on terms of an Open Access and Interconnection framework for ENEE network, to ensure third-party access to capacity on a transparent, non-discriminatory and equitable basis

Bulgaria: Bulgarian Telecommunications Company (BTK) Rural Wireless Local Loop

Examined prospects for rural deployment of Wireless Local Loop (WLL) technology as part of major effort on behalf of dominant national operator to extend basic service to underserved/unserved rural areas.

- In initial needs assessment / requirements definition phase, reviewed and analyzed extensive socioeconomic and demographic data on rural Bulgarian communities
- Evaluated wide range of technology options; developed recommendations for both “best suited” and “least-cost” alternatives
- Analyzed technical, cost and regulatory issues of interconnection of new wireless systems to existing fixed-line network
- Prepared Service Plan, Technical Specifications and complete Tender Package (World Bank format) for in-country Pilot Program(s)

ICT Planning, Procurement and Implementation

Bulgaria: Bulgarian State Railways (BDZ) Master Plan for IT and Telecom

In charge of extended USTDA-funded project to develop 5-year Master Plan for IT/Telecom.

- Reviewed existing IT and telecom systems; developed near- and long-term plans
- Evaluated and provided input to pending World Bank-funded IT procurements, including Passenger Information System, Freight Operations System, Financial Management System; provided independent review of bidder responses
- Subsequently developed Business Plan for commercialization of new fiber-optic infrastructure, including review of legal/regulatory obstacles

Bulgaria: Eurocom Cable Expansion and IT System Upgrades

Part of Booz Allen Hamilton team engaged in a USTDA-funded Technical Assistance to assist Eurocom Cable (EK), the No.2 CATV operator in Bulgaria, to plan and implement the expansion, upgrading and modernization of its network and operations.

- Developed blueprint for implementation of advanced IT systems (e.g., Billing, Operations Support, Workforce Management, Network Management, Call Center Support) with enhanced capabilities and functionality, to enable EK to meet stringent telecom industry service targets vis-à-vis its own personnel, customers and suppliers

Uzbekistan: National Customs Authority (GTU) Telecom Plan

As part of this pioneering assignment, which involved negotiation of the first contract executed by the GTU for outside consulting services:

- Conducted extensive in-country review of GTU operations, communications requirements, existing infrastructure and facilities, ongoing/forthcoming procurements
- Evaluated a wide range of fixed-line and wireless telecom technology/service options
- Prepared a comprehensive national telecom development plan
- Developed recommendations and proposals for acquisition of major voice and wireless communications systems

ICT Regulatory and Policy Affairs

Tajikistan: Communications Sector Technical Cooperation Project, Phase 1

Regulatory and Legal Expert on EBRD-funded project to assist the Office of the President of Tajikistan with the preparation of a new Law on Electronic Communications and with drafting of sector policy.

- Working with international and local legal counsel, conducted extensive review of Russian-language legislation and regulation bearing on the telecom sector, with a particular view to establishing degree of conformity to WTO framework and International Best Practice; prepared detailed summary report
- Assisted with preparation of new draft Law on Electronic Communications
- Participated in joint Working Group; at the request of Working Group, prepared and delivered a Russian-language tutorial on Universal Service concepts and the establishment of a Universal Service Fund

Montenegro: Interconnection and Tariffing Project

Regulatory and Legal Expert as part of EBRD-funded project to assist the Montenegrin regulator Agentel with elaboration of the interconnection and tariffing framework, and to review and evaluate new *Draft Law on Electronic Communications*.

- Working with international and local legal counsel, conducted extensive review of legislation and regulation bearing on the telecom sector, with a particular view to establishing degree of conformity to EU Directives and WTO framework
- Prepared detailed summary report of sector legislation and regulation, and Position Paper regarding EU and WTO conformity of new draft Law on Electronic Communications
- Analyzed Reference Interconnection Offer (RIO) of dominant operator T-Com; prepared set of recommended changes as well as follow-up actions for Agentel
- Conducted training sessions on interconnection, RIO principles and issues in VoIP regulation for Agentel staff

Armenia: Design of Universal Services Fund for Telecom Sector

Chief Technical Expert, with secondary responsibility for drafting of regulatory instruments, on project to design and structure Universal Services Fund for Armenia on behalf of the national telecom regulatory agency (Public Services Regulatory Commission, PSRC), based on an

assessment of current infrastructure, services, coverage, need/demand, existing legal/policy/regulatory framework, national priorities, etc. Deliverables include a full set of draft regulatory instruments, plus recommendations on Fund priorities, necessary changes to existing legal/regulatory framework, pilot initiatives, plus two in-country Workshops to present results and gain stakeholder input.

- In initial needs assessment / requirements definition phase, reviewed and analyzed extensive infrastructure, coverage, service, socioeconomic and demographic data, with particular emphasis on rural environment in Armenia.
- Developed set of proposed Universal Service “bundles” and presented same at first project Workshop (December 2007).
- Conducted in-depth Tutorial (in Russian) on Universal Service concepts for PSRC staff.
- Evaluated feasibility and cost of various technology options (e.g., CDMA450, 2G/2.5G/3G cellular, WiMAX) to provide guidelines for Fund sizing and to develop recommendations for “best suited” / “least-cost” alternatives
- Prepared draft regulatory instruments covering mechanism of establishment and maintenance of Universal Service Fund, operator obligations, identification and prioritization of qualifying Universal Service projects

Moldova: Communications Sector Technical Cooperation Project

Expert on Sector Policy and Universal Service as part of team deployed on two-year EBRD-funded project to strengthen the telecom sector regulatory agency (ANRCETI) in a variety of areas, with the primary aim of establishing a maximally EU-conformant framework for interconnection, access, Universal Service, costing and tariff regulation, and a secondary objective of providing assistance to the Ministry of Information Technology and Communications (MITC) in the development of a telecom sector policy and action plan.

- Prepared general survey of telecom sector, covering major fixed-line and wireless operators and ISPs
- Conducted extensive initial review of legislation and regulation impacting the telecom sector (including *Electronic Communications Act* of 2007, laws on informatics, competition, licensing, regulation of business activity, consumer protection)
- Assisted MITC to prepare first draft of telecom sector policy
- Reviewed MITC draft policies for broadband Internet access and migration to digital television; proposed revisions to bring policies more into line with European and world best practice
- Interviewed representatives of first- and second-tier operators and ISPs to ascertain their views on a range of sector policy and regulatory issues (privatization of Moldtelecom, Universal Service, interconnection, access, state of sector regulation)
- Provided input to Strategy Workshop involving all major telecom sector stakeholders

Kosovo: Telecom Policy and Regulatory Technical Assistance

Part of Booz Allen Hamilton team providing EBRD-funded technical assistance to Ministry of Transport and Communications (MTC) and Telecom Regulatory Authority (TRA) of Kosovo.

- Assisted MTC to prepare a comprehensive telecom sector policy, with a 5-year horizon, in conformity with Ministry’s obligations under the Telecom Law

- Participated in review of Telecom Law to identify areas and issues where supplementary legislation or new regulation required
- Worked with TRA to establish necessary organizational structure, staffing and training requirements of newly established telecom regulatory agency
- Conducted in-depth interviews with public- and private-sector stakeholders in telecom sector; prepared detailed sector market analysis covering all major fixed-line and wireless operators and ISPs

Serbia: Telecommunications Regulatory Development Project (Phase 2)

In-country project manager, with principal responsibility for planning and implementing an intensive training program on Interconnection and Universal Service for RATEL staff, including assistance with the development of:

- Comprehensive Interconnection Guidelines as mandated by Serbia's Telecom Law
- Universal Service implementation plan, with particular emphasis on the establishment of a Universal Service Fund as required by the Law
- Recommendations to Ministry of Capital Investments (responsible for telecom policy) regarding Universal Service policy guidelines to be adopted

Serbia: Telecommunications Regulatory Development Project (Phase 1)

Part of Booz Allen Hamilton team including internationally recognized law firm and local partners that provided EBRD-funded technical assistance to Government of Serbia in the establishment of the Republic Telecommunications Agency of Serbia (RATEL), as mandated by new Telecom Law.

- Conducted initial review of Serbian telecom sector; interviewed wide range of public- and private-sector stakeholders; identified issues requiring priority attention by regulator
- Assisted in preparation of TRA Framework Documents (recommendations on general organization, specific competencies, allocation of responsibilities, position descriptions)
- Provided input to further recommendations on supporting resolutions and regulations

Latin America: Technical Assistance Studies on Behalf of Regulatory Agencies Ente Regulador (Panama), SIGET (El Salvador), OSIPTEL (Peru), CONATEL (Honduras)

On behalf of US Trade and Development Agency (USTDA), conducted Definitional Missions to national telecom/broadcasting regulatory authorities.

- Evaluated prospects for USTDA-funded Technical Assistance, to promote:
 - ◊ strengthening of telecom interconnection regime (El Salvador)
 - ◊ strengthening of regulatory oversight/enforcement capabilities (Peru)
 - ◊ migration to digital TV/radio broadcasting (Panama)
 - ◊ establishment of general framework for telecom sector liberalization and development (Honduras)
- Interviewed wide cross-section of public- and private-sector industry representatives
- Developed recommendations for focused USTDA-funded assistance programs

Other ICT-Related

Liberia: Cellcom Mobile Network Expansion

Technical Telecom Specialist providing support for an initiative by Cellcom (the second largest mobile operator in Liberia) to seek a \$20 million loan from the Overseas Private Investment Corporation (OPIC) to finance a nationwide expansion of its existing GSM network.

- Carried out review of Liberian legal/regulatory regime and of Cellcom's license obligations
- Conducted independent top-down market assessment and analysis of mobile sector in Liberia, with reference to conditions in other ECOWAS countries
- Reviewed Cellcom's build-out plans; market, capital-expenditure and revenue assumptions
- Assisted with preparation of Preliminary Information Memorandum for submission to OPIC

PREVIOUS PROFESSIONAL EXPERIENCE

- LYNX Technologies, Inc., Fairfield, NJ: Vice President; Senior Consultant
- Alitalia Airlines, New York, NY: Communications Manager North and Central America
- Gartner Group, Stamford, CT: Consultant
- Istituto Mobiliare Italiano, Milan, Italy: Assistant to Director of Information Systems
- John Wiley & Sons, New York, NY: Telecommunications Manager
- Brown University, Providence, RI: Communications Coordinator

EDUCATION

- Columbia University, New York, NY: MA (mathematical/computational linguistics, concentration in Slavic languages)
- Brown University, Providence, RI: BA (major: physics)
- Moscow State University, Moscow, former USSR: one year advanced graduate study