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the guru

manuel

victor

sabatón

gonzales

VGS



Homenaje a Van Gogh

B.K.G.S.

VGS



VGS



or

I believe that, there is a crisis in regards to engineering studies. Victor Sabatón

manuel victor gonzales sabato

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Biography

Manuel Victor González Sábato was born in Olavarría, Buenos Aires Argentina, in 1941. He received the Electrical Engineering diploma from the Universidad Nacional del Sur (National University of the South), in 1967, and the title of Honorary Professor in 2002.

He worked for Electrical Company of the Buenos Aires Province, and was later a member of the Board of Directors of CAMMESA. He was also Technical Advisor of the Distributors Association of Argentina. Since 2001 he is Independent Consultant in the Electrical Sector. Mr. González Sábato was teaching and he reached the position of Electrical Protections Professor in the National University of the South, Argentina. He became an Honorary Professor in 2002.

He is member of CIGRE since 1985 and Honorary Member after 2004. Mr. González Sábato is author of many papers and books about instrument transformers and protection systems.

Mr. González Sábato is married with Marta García and has two sons, a daughter and a grand daughter.

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I like this
sculpture
because it is

an interesting

combination

of art and

engineering.

PAC World: Do you mind telling us when and where you were born?

VGS: I was born in a little town in the country, named "Espigas", in Olavarría, Buenos Aires province. It is located in the heart of the "Humid Pampa" (Pampa Húmeda) of Argentina.

PAC World: Do you think there was something in your childhood that resulted in you becoming an engineer? Or in your genes?

VGS: Yes, my father loved science and technology, and he passed his passion to me.

PAC World: Did you spend your childhood in the same place?

VGS: I lived in Espigas till I was 13, and then, I moved to Olavarría, where I finished high school. On different occasions I returned to Espigas, from where I've got nice memories. I can still smell its eucalyptus forests and see its immense green fields.

PAC World: How and when did you decide to study engineering?

VGS: First of all, I've got to tell you that my grandparents

were immigrants; two of them were from Spain and the other two from Italy. They had left behind a very difficult economic situation and were eager for progress - not only an economic progress, but a social and cultural progress too. Thus, the first generation from my mother lineage born in Argentina - my mother and my uncles - graduated like teachers. Therefore, the second generation was practically obliged to have university studies. Within this context and under my father's influence, as I mentioned before, I made up my mind to study engineering practically during my childhood.

PAC World: What about electrical engineering?

VGS: I attended my university courses at the Universidad Nacional del Sur, in Bahía Blanca city. At the beginning, I enrolled myself in Mechanical Engineering, but soon afterwards I changed my mind to become an Electrical Engineer. So, I enrolled myself in Electrical Engineering which was really a prestigious Department within the University. The Electrical Engineering Dept. had a staff of

excellent professors, and both research and development were of relevant importance. Likewise, I'd like to emphasize how this University's Math Department influenced me. This Math Department had a staff made up of professors from Europe that had settled down in Argentina after the Second World War.

PAC World: What made you interested in electric power systems protection? Did they teach it at the time?

VGS: When I attended the University, power systems protection was taught as a mere complement to other subjects, such as Generation Plants and Power Transmission. At the moment I had to prepare my Last Work for the Career, my professor Alberto Álvarez suggested to me to work on something new: "Application of electronic technology to protection relays". I agreed and it meant a great effort to me because I had first to study very elementary things. However, this marked my future professional life. After graduating, the Electrical Engineering Department asked me to prepare a subject on Electrical Protections. From that moment on I started my teaching career, which I developed together with my other professional activities.

PAC World: What else did you do other than studying while you were in school or in college? Did you play and sports? Music? Arts?

VGS: I've always liked soccer, but I was a bad player. Also, I used to swim. But rather than sports, besides my profession, my real passion was art, mainly paintings and drawings, which I still practice whenever I have time.

PAC World: Where did you start your career? In what position?

VGS: I started my professional career like an Engineer Jr. at the Base Naval Puerto Belgrano of the Argentine Navy, like civil staff.

PAC World: What has your role been during the different stages of your career?

VGS: After nearly two years at the Base Naval, I began to work at DEBA – the Buenos Aires Electrical Company (generation, transmission and distribution) where I was immediately appointed like Head of the Protection and Measurements Department of the South Region. I had been 17 years in that position when I was appointed as South Region Assistant Head and 2 years later I became Head of this region. In 1992 I was appointed as Technical Auditor Manager of the whole company, and in 1994 I was appointed as Technical Manager, also of the whole company. I left DEBA - at that moment it was named ESEBA - when it was privatized (up to that moment it was a Buenos Aires Province state-owned company). Soon afterwards, I began to work as a Technical Advisor to the Electrical Power Distributors Association of the Argentine Republic. (Asociación de Distribuidores de Energía Eléctrica de la República Argentina) Besides, for four years I was representing the Distributors as a member of the Board of Directors of the Wholesale Electrical Market Administrative Company (CAMMESA). In 2003 I began

to work as an Advisor of the Argentine Electrical Sector and, under this role, I developed an important work for TRANSENER, the Argentine transmission company of 220 kV and 500 KV high voltage lines. This work consisted in analyzing all this company's protection systems and suggesting changes where necessary.

PAC World: You have been a member of CIGRE for more than 20 years. Why did you join CIGRE?

VGS: In 1985 I was widely known in my country, since I used to give post-graduate courses for protection specialists in all the electrical companies. Thus, I was offered to become a member of the Study Committee 34 – Protection and Control - of the National Argentine Committee, where practically from the beginning, I was appointed like Convener. In 1987 I was appointed Regular Member of the International SC 34, occupying this position during 12 years. In 1990 I was appointed President of the National Argentine Commission and soon afterwards I represented my country in the Administrative Council till 2004. In this year I was bestowed the Honorary Membership distinction. During 2 years I represented the Administrative Council at the Technical Committee.

PAC World: How did you feel at your first CIGRE meeting?

VGS: It was a great experience. I had attended two Latin-American meetings of the CIGRE (ERLAC), but my first meeting in Paris in 1986 was unforgettable. There I could personally meet many protection specialists whom I had known through their own papers in CIGRE and IEEE. I remember, among others, Professor Phadke, Dr. Chamia, Professor Horowitz, but mainly Professor Charles Concordia, whose books, though not being a protection specialist, constitute an important basis for my knowledge about power systems.

PAC World: What do you think is different between CIGRE then and now?

VGS: Between 1990 and 2007 there have been many changes at CIGRE. Up to 1990 CIGRE has been an exclusively technical organization. Afterwards, it began to develop and cover other subjects, such as organizational, environmental and regulatory areas. At that moment, there were many members of the Administration Board who considered the CIGRE to be a technical organization without participation in other aspects of the industry. Many other members - myself included - thought that the organizational, environmental and regulatory topics were closely related to the technical aspects. I remember that in 1994 I presented to the Administration Board a work on the Regulatory Frame adopted by the Argentine Republic. With this work, I tried to show that the difficulties to enlarge the transmission grid meant the need of new protection and control techniques to achieve a greater and more reliable usage of the existing grids.

PAC World: Do you remember your first paper? What was the subject? Where did you present it?

VGS: In 1968 I presented my first paper at a conference



was presented

held by the Universidad de San Juan, Argentina. This paper was on "Automatic Replacement of a Conductor with a Permanent Fault by a Fourth Reserve Conductor". In 1973, I presented my first international paper at a CIER Congress (Regional Electrical Integration Committee) in Foz do Iguaçu, Brazil, and the subject was "Distance Protection of Teed Lines".

in 1968 at a conference held by the Universidad de San Juan, Argentina.

PAC World: How many followed it and can you select your favorite one?

VGS: These papers were followed by another 45. I've got several favorite ones and divide them into two different categories. One is purely technical and it includes my favorite papers which I presented between 1987 and 1991 at the ERLAC (Latin American Regional Meeting of CIGRE). I consider them still valid, since they analyzed the responses of the different algorithms for digital protections and I believe that their conclusions were confirmed in practice. The other subject is teaching protection engineering, and there was a paper I presented at the SC 34 Colloquium held in Antwerpen, Belgium in 1993. There I focused on the need for a new type of training for protection engineers due to the introduction of digital protection (numerical).

PAC World: Which was your last one?

VGS: M. V. González Sábato, O. Ramati; " Conventional Engineering and Regulatory Engineering in Distribution Companies in Argentina" – CIRED 16th International

Conference Amsterdam '2001 – Session: Changes in Business Environment, New Skills. After this paper I dedicated all my efforts to a new and complete book on protection systems, which is 90% finished.

PAC World: How do you select the subject of your papers?

VGS: I believe that papers should be the result of what one is studying. When the results of what I was studying made me think that a paper would be worthy to transmit my experience, I used to summarize my work and present the paper at the closest proper meeting.

PAC World: What is the difference in the workplace between when you started work and today?

VGS: Please, I need you to be more specific.

PAC World: You started in the world of electromechanical relays. How did you feel about solid state relays?

VGS: My first contact in practice with solid state relays was in EdF in France, where I was sent by my company to improve my knowledge and where I stayed for several months. EdF had only 5 Distance Relays installed for experimental purposes, designed together with the company CdC. I thought they would improve the information processing and the reply speed, but up to that moment there were not important changes in their philosophy as compared with electromechanical relays protection.

PAC World: What do you think about microprocessor relays?

VGS: I consider them to represent a deep change in the protection engineering. The information processing possibilities of the analog electromechanical or electronic relays are very limited. The modern high-speed



microprocessors can process on-line practically all the information they get. Thus, protection engineers should perfectly know the information that the power system may supply in case of a fault or other disturbances in order to determine the proper algorithms for a prompt and selective fault clearing. I believe that the algorithms based on fault transients and adaptive processing constitutes the protections successful future, without forgetting the fantastic means of the modern communication systems.

PAC World: You have an interest in instrument transformers. What do you think about non-conventional instrument transformers and their place in the substations of the future?

VGS: At the early 90's, the non-conventional current transformers seemed to have an incredible development. Actually, it was not so. I do not know why, but there may have been manufacturers' economic interests at stake. These manufacturers may have preferred not to spend so much money in the non-conventional transformers research. I believe that there is a huge quantity of technological resources to develop accurate, reliable and cheap non-conventional equipment. However, I should admit that I am not a specialist and that I may make a mistake, but I think this type of transformers will dominate the scenario.

PAC World: You authored a book on protection of electric power networks. What is your opinion about the use of protective relays with different operating principles as primary and backup (or Main 1 and Main2)?

VGS: I prefer different principles for backup conditions. It does not imply different hierarchies, but complementation. It means that all types of faults which are not adequately

contemplated by a determined principle should be detected by the other principle. Likewise, a protection covering said faults should be adopted like a complement. Anyway, different constructive solutions are more important than different principles. During my professional life, I have detected many similar problems in identical relays.

PAC World: Do you follow the developments of IEC 61850?

VGS: Yes. I am very much interested in this Standard. In the mid 90's I was a member of a WG of the CIGRE's SC 34, which Convener was Mr. Newdell from England. The purpose was the Application of Digital Techniques to Control and Protection, and we suggested the development of a standard on this subject.

PAC World: What do you think its impact will be on the future of protection?

VGS: The impact will be important, since it obliges manufacturers to produce relays that speak the same language, at least the same external language. The electrical companies will get the positive impact; they will be able to operate open systems and will not depend on a sole supplier's provision. Undoubtedly, stations designers should know the standard deeply to take advantage of it.

PAC World: What is your definition of retirement?

VGS: I have not thought of retirement yet, and even less about its definition. I like what I do and hope to keep doing it for a long time.

PAC World: When you look back, what would you consider the highest points in your life?

VGS: From a family point of view, it is my sons' birth. From my professional point of view, the Honorary Membership distinction that the CIGRE bestowed upon me.

PAC World: You have been married for how many years? What is the secret?

VGS: More than a secret - it is a mystery. I cannot really understand how my wife bore me during over the 40 years of our marriage.

PAC World: What is your favorite food?

VGS: Like a good Argentinean - barbecue. And like a descendant from Italians - "pasta" (spaghetti, ravioli, ...).

PAC World: What music do you usually listen to?

VGS: I like symphonic music a lot. My favorite symphony is the New World Symphony, by Antonin Dvorak. But I have a place in my heart for the tango, and my favorite author is Astor Piazzola. I beg everyone who loves good instrumental music to listen to "Goodbye Nonino" ("Adiós Nonino").

PAC World: Do you have a hobby? How do you spend your time when you are not working?

VGS: I love walking with my wife in Buenos Aires neighborhoods. When we don't go for a walk, I paint or draw. Likewise, I watch soccer matches or Formula 1 car races on the TV.

PAC World: How much time do you spend in front of a computer per day? What do you think about the role of the Internet in our world?

VGS: Normally around 4 hours a day. Internet introduced



a deep technological change but, as a counterpart there is the risk of excess of communication that cannot be processed by the human brain that continues having the same processing capacity since many centuries. Likewise, the encyclopedic knowledge may arise. And what is even worse, Internet may not leave us time to think, and thinking is the human being's worthiest attribute.

PAC World: If you were in my place, what question would you ask?

VGS: I have no idea, because your battery for making different questions is really good.

PAC World: Why did you decide to start teaching?

VGS: Teaching is a genetic subject for me. My mother was a great teacher, who thought that teaching was a 24-hour-a-day task. The people of my town thanked her, by naming after her the street on which the school where she used

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to work first like a teacher and later like its headmistress is placed.

PAC World: What subjects do you teach?

VGS: During 30 years I taught "Electrical Protections in Power Grids" both in regular and post-graduate courses. I used to be a Professor of regular courses at the Universidad Nacional del Sur. Though retired from the regular teaching activity, I was bestowed the distinction of Honorary Professor and sometimes I am invited to give courses or lectures. At present, I only give post-graduate courses at different Universities in Argentina.

PAC World: There is a concern in the industry world-wide regarding the interest of young people in electric power engineering? Do you see that as a problem yourself?

VGS: I believe that in the whole world, and my own country is not an exception, there is a crisis in regards to engineering studies. Most young people tend to attend simpler careers, mainly those ones that do not deal with math and are short. Particularly, Power Electrical Engineering requires abstract thinking and this generation of young people is not accustomed to it, since they mostly prefer to deal with concrete images.

I'd rather promote the attitude towards thinking, thinking and thinking, than the power electrical engineering career. Unfortunately, television presents everything ready to consume, and is an enemy to this idea.

The more quantity of young people who get used to thinking and creating, the more quantity of better power engineers we shall get.

PAC World: Any advice for the young protection engineers?

VGS: Yes. I advise young protection engineers to study the power system deeply. The protection engineering does not mean protection devices engineering, mainly at present that we are not in the analogical devices era. If a power system behavior in case of faults and other disturbances is perfectly known, not only adequate protection algorithms will be properly chosen, but a better diagnostic of functioning abnormalities that provoke wide area disturbances will also be made.