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### 5V7TT – Togo, 2010

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The call of Africa is strong for us, what we are going to describe here is the 5<sup>th</sup> consecutive dx expedition of our group in this wonderful and mysterious continent.

After the previous expeditions to Niger, Somalia, Djibouti, Sierra Leone and Ghana, this year we decided to land in Togo. Why has Africa, and more precisely the West coast, been our target in the last years?

It is not easy to give a proper answer to this question as we are not looking for the site, the monument, the landscape. Others are the motivations which drive us to chose a place instead of an other.

What we are looking for, while targeting a country, is the load of adrenaline pushing on us in the moment we switch the radio on and we are immediately submerged by huge pile-up and then we try to go as fast as we can or when we try to catch the letters of a call despite the strong static noises coming from an imminent storm or when, defenceless, we swear at a sudden, yet usual, electric energy black out.

And Africa spreads generously those feelings. Africa West coast is in a lucky position, mostly when the solar activity is low, as Europe is to the North, USA to the North-West, Oriental Europe, Asiatic Russia and Japan are to the North-East, and West Africa is at the edge of this triangle.

The aircraft had just taken off from Ghana one year ago, and we were already wondering where the next dx expedition would have driven us to.

‘Cause this is the way we are: our ears are still tired and buzzing after 2 hyperactive weeks, we are still feeling the effects of sleep debts and we are already dreaming of our next destination!

Once back, we started immediately the usual research activity, the “most wanted” countries ranking analysis, the search of the site, presence of islands, together with the study on the propagation, forecasts about the solar spots and so on.

And it was just for the propagation conditions that we focused once again on Africa, as the solar activity is still too low and unstable to encourage us to take into account farther targets, even if more exotic.

The first destination we considered was Gabon, target on which we spent some efforts before having to give up out

of some unfavourable conditions. It was May 2010 and the first 6 months of the year had passed without results. We were then obliged to hasten.

We got in touch with Franco, I1FQH, who was in Togo last year and he was planning to get back there in July. Thanks to him we found good contacts in Lomè and we could get all the necessary information to obtain the licenses.

We then started to look for a site having all the necessary requirements to perform our activity. Unfortunately there are no islands in the sea of Togo, meaning no way for operations related to the IOTA program. This could have made our operation less exiting, but, on the other hand, it would make us freer to select the site for our activity.

Togo was well far from the top of the “most-wanted” ranking list but, in spite of being closer to the 100th place, it could still arise enough fun if we thought to exploit some propagation opening on the high bands due to some waking up of the solar activity.

Finding a resort with all the necessary features to host us and allowing our activity to be successful was not an easy job. Surfing on the net we finally identified a site on the beach, just on the outskirts of Lomè.

We started immediately to contact the resort manager and everything was looking positive. Even Franco, who was in Togo operating as 5V7DX, went to visit the site and he sent us some pictures. Based on all that our conclusion was positive and we tried to finalize everything with the resort owner.

We remained astonished when, after exchanging many mails and telephone calls, we received the communication that our booking had been refused.

Coco, one of Franco’s friends in Togo, went to talk to the resort’s owner to understand the reason of the refusal and he understood they were concerned about our activity: they were afraid to attract the curiosity of some police authority and, therefore, to get problems.

It was nearly the end of July and it was then necessary to rush, looking for an alternative site. Stefano found on the net another resort on the Togo lake beach, not far from Togoville, the former country capital, 30 km far from Lomè

Unfortunately the place was not visible on Google Earth as it was in a low definition area, so we had no alternative

but to count on our lucky star. Once the resort problem had been solved, the remaining one was the weight of the equipment, getting worse due to the unexpected renounce to join us made by Carlo IK1AOD for health reasons.

At first we planned to use vertical antenna array for low bands, the most wanted, but we were forced to give up, in order to avoid overweight of our luggage. Silvano did a great job making the miracle to stuff three fully equipped stations into 12 parcels, 2 per each of us, which weight was less than 23kg. The PCs and the personal belongings would be carried into our hand luggage, trying not to exceed 10 kg.

The three stations were equipped with the well tested K3, 2 linear amplifier Acom 1000 and one solid state for 0,5 KW, 2 antennas Spyderbeam, one upgraded for the 30m band. Finally 2 verticals 40-80m and an inverted "L" for 160m. We banned all the aluminium antennas, apart from the small and light 7 bands vertical, which has been following us for years, glass fibre is much lighter and enough resistant.

To receive on the low bands we decided to test some different solutions to compare them in the field and to validate some comments found on the net. We tested a "diamond" already used in Ghana one year ago. The second one a DHDL, a double loop, and a roll of 200m of wire to build a "beverage", dropping into a bag at the last minute thanks to the insistence of Vinicio. We were not sure to find room enough to lay a "beverage", therefore we decided to be ready for any circumstance, even expecting rather noisy bands.

And then the material for the PC network, power supply, coax, mosquito killers, ropes and pegs, and other stuff. An electric coffee machine and a robust coffee stock.

Obtaining the license in these countries is never easy and simple: when talking, everyone is promising, but rarely this is followed by facts. Thanks to Franco and his friends in Lomè, who went several times to the competent bureau, we could get a written documentation before our departure, including a precious declaration from the Communication Authority where it was stated that the equipment carried by us was dedicated for authorized operations. Such declaration is extremely important as it makes easier the import and export Customs operation upon arrival and departure.

Finally, the departure day arrived and on Saturday 24<sup>th</sup> of October in the afternoon we were at Malpensa airport ready with all our luggage. At the check-in we met the first obstacle, discovering that, for some unpredictable reason according to the Royal Air Maroc computer system the trip for Marcello, Angelo and Vinicio would have ended in Cotonou, Benin, the airport were the flight lands before the final jump to Lomè in Togo, despite the booking being done to Lomè. After several unsuccessful attempts of the check-in employee, we could not find other solution, but to go and try to solve the problem in Casablanca, during out transit there. Thanks God we

could easily get the proper boarding at the Casablanca transit desk.

Togo is not very far, just 4000 km from Italy but the trip is not short and taking off at 15,30Z from Milan, we landed in Lomè 12 hours later, at 03,30Z the morning after. After collecting our luggage, the first obstacle was the Customs. Coco and the uncle of Don Lorenzo (who is a priest from Togo living in Northern Italy) were already waiting for us to help us, but the customs officer required us to wait until his responsible would come, later in the morning.

As in a film already seen one year ago in Ghana, after a long negotiation and thanks to the declaration issued by the Telecommunication Authority we could go out the terminal with our stuff (just leaving a 400 E. caution) and we had to promise to go and talk with the chief officer on the following day.

The hotel minibus was waiting for us and after stuffing the luggage in, we split between the minibus and Coco's car. We reached the resort after one hour driving. Once we got there we realized that we were lucky in our choice, as the site was nice, the rooms were comfortable and clean. The resort consisted in an array of little bungalows, 22 rooms in total, just in front of the lake. We had booked 4 twin bed rooms, at the two ends of the array, in order to minimize the interference as much as possible. The SSB station, the noisy one, was alone at the Northern side, the CW and RTTY at the Southern side.

We started straight away to install the first station and the relevant antennas, a Spiderbeam (28/24/21/18/14/30) and a vertical 40/80 as we were aiming to be in the aura as soon as possible. At 12,08Z the first qso on 18MHz CW with EA7KJ were in the log.

While the first station was operating, we started setting up the second one, but right at the final step of the Spiderbeam installation a violent storm started to afflict us and we were forced to resist under the rain downpour to complete the mast anchorage. At the end we were soaked to the skin: African weather had just welcomed us!

Our frenetic activity of installing antennas and laying wires arose a certain concern among the hotel personnel and the few guests, nevertheless their curiosity seemed to be satisfied with a few replies to their questions.

The resort was nearly deserted during the weekdays, it got lively just on the week end, mostly by Sunday lunch when a brunch is offered. The restaurant owns the reputation of being one of the best ones in Lomè and sometimes there are guests even during the weekdays. In fact the cooking was not bad, French style, even if we were missing the lobsters we got in big quantity in Ghana last year.

We were not annoyed by the lack of guests, this way we were not obliged to reply all the time to their questions and we were free to move even nighttimes. The climate is

rather hot and wet in this time of the year and it is pleasant to have a bath every now and then. Unfortunately the water in the lake was not clean enough and we were advised against swimming in the freshwater.

The sea is not far, just a couple of km, but the beach type and the backwash waves strongly discouraged us from going into the water, to avoid the risk to be sucked offshore and to face serious problems to go back ashore. Luckily there was a swimming pool in the resort, where we often had a bath.

Luckily enough, we never met wild or dangerous animals, even when we were obliged to walk in the grass where the Spiderbeam was installed, to turn it towards Europe, to USA or to Japan long path. The grass was knee-high and urticant but, in spite of us wearing just sandals, we did not have any accident even if we were moving with some concern.

The only wild animals there were a couple of crocodiles, kept in the resort as an attraction in a concrete basin protected by metallic mash. They were absolutely motionless for all the time and it made us a little sad thinking about them forced to spend their life in such a captivity.

After having organized several dx expedition in the last years, we have developed a remarkable skill in our set ups, trying always to improve our efficiency and to exploit to the best the propagation opening in the various bands, mostly the highest ones, even when it is not favourable.

We have been experiencing that it is worth having all the stations linked by a network, as this allows monitoring continuously the bands on which the stations are active and, when one of them finds favourable conditions, warning the others in real time. This facility is available in the N1MM package, but it is necessary to build a network and we overcame brilliantly the problem of the distance between the stations by building a dedicated wi-fi net.

A serious handicap of the resort, which we were aware of, was the absence of the internet connection. We know how important it is to get connected to the net, as we need to receive feedbacks, to be connected with the packet cluster, to up-date the log-on line, therefore once we got on site, we immediately began to try and find a solution to the problem.

With the assistance of Coco and his car driver, Alfeo was forced to wander for two days in the capital, visiting the offices of the two mobile telephone providers to find a solution, a USB key with GPRS “flat” access, pretty slow, but very expensive, more than 300 Euro for two weeks! Unfortunately it was the only option available, therefore we were obliged to accept this extortion.

As soon as we got the internet access we could connect the SSB station to the packet cluster and later on all the other devices were connected to a further wi-fi net.

Worthy of note is the up date of the log-on-line. For the dx hunter having the access to the log-on-line means to verify if a qso is properly recorded by the dx station. It is very helpful in case the qso has been made in difficult conditions and when it is possible that the call has not been correctly recorded. By checking the log-on-line we can avoid to repeat the qso, if it is not necessary.

It means to reduce strongly the unnecessary repeated qso, thus giving more opportunities to others to enter the log. Normally the log-on-line up dating is made daily or more often in case a good net connection is available on the dx expedition side. Just a few years ago, during our expedition to Mucha Island close to Djibouti, to up date the log-on-line we were obliged to sail to the main land and to upload the files going to an internet café.

As we said before, in Togo the connection with the net was very slow. Nevertheless we have been able to up date automatically the log-on-line every 5 minute. IH9GPI, Giacomo worked the wonder: he wrote a software suitable to pack in few Kbyte the log generated by N1MM and to upload on the 5V7TT web page for the up dating.

In spite of the slowness of the net connection, the system worked perfectly for all the time. Nevertheless it was not enough to avoid making double qso, and at the end of our expedition we counted more than 2,000 double qso, definitely too much in relation with the effort did to keep the log-on-line up dated.

Once the stations set up was accomplished the operations started full steam, even though the 5V country was closed to the 100° in the most wanted ranking, the pile-ups were huge, well over our more optimistic expectations. The low bands were, unfortunately rather noisy, mostly on 80 and 160m and due to that we could not make a big qso number in spite of our efforts and of our diligent presence on the air, even during the inhumane hours.

We could compare various low bands receiving antennas and we may affirm that the “beverage” headed to North was well over all the others. The DHDL, headed to USA, proved to be surprisingly efficient on 80m but in 160m it performed less than the “beverage”. The “diamond”, compared to the others, revealed to be deaf.

The resort bungalows were oriented North – South and this obliged us to erect the beams antennas one behind the other and, even if the distance between them was 100m approx, this alignment was the source of some mutual interferences on some bands.

We got a great advantage by being just in front of a large water surface, which acted as a reflector toward North and West. To exploit better the water surface, we installed the small 7 bands vertical straight in the lake and we could collect significant results, more than 9,000 qso working CW and RTTY, most of them barefoot with just 100W.

The precariousness of the electric energy supply seems to be a constant reality in Africa and almost every day we suffered one or more power shut off lasting for a few minutes or for hours. In addition to that the weather was hitting us almost daily with heavy rain and the relevant static noise train.

A big 100KVA diesel power generator was available in the resort to supply the electric energy during the network power failure. The generator start was manual and, in spite of our several requests, we have never been informed in advance when it was going to be started or stopped. In practice, per each power failure we got two power shut offs. On the Friday night, just in the middle of our expedition, we were hit by gusts of a tropical storm with heavy rain and strong wind.

To our luck, with the first sunrise light we realised that our antennas had not been suffering any damage, apart from the 7 bands vertical, which fell into the water due to a rope break. As the water of the lake is not salty, it was sufficient to recover it and to dismantle the traps and the balun to dry them up under the sun.

The tropical storm created a big damage in the power network and the electricity shut down during night time. The generator was started, but it stopped 4 hours later. Without power we were completely inactive, waiting for a service engineer coming from Lomè. After some time he found a damage in the fuel pump, then he had to move to Lomè to get the spare part. It was late afternoon when the generator was ready, exactly when the power from the main net became available again. Because of this problem we have not been able to operate for more than 8 hours.

We have already experienced how ruining can be for our rigs the unexpected power failures and also in this expedition we suffered some damages. We did not have problems with the K3, as it happened in Ghana one year ago, but we can not say so for the linear amplifiers.

One of the Acom amplifiers, after a repeated power failures, stopped working. Nothing happened even after we replaced the electronic tube and the antenna vacuum relay, which are the most sensitive parts and which we had as spare. This happened on Sunday and the diagnosis made by the Acom Customers' service, whom we informed by email and to whom we spoke on the following morning, was hopeless: in addition to the electronic tube, also a control board was damaged and it could not be possible to fix it.

The broken amplifier sadly went back into his box and the solid state amplifier was moved to the SSB station. But this one too had some problems, as something was not working properly in the band filters switching and often, in certain situations, it generated spurious and splatters interfering heavily with the other stations, so that we often were forced to renounce using it.

It would have been logic to expect that the loss of an amplifier and the abnormal operation of another, both

happening halfway through our expedition, could heavily hinder our operations, but to our great astonishment we needed to sustain very fast and huge pile-up both in SSB and CW with Europe, USA and Japan. The received reports were really enthusiastic, our signals were always strong enough and all this drove us to reconsider the real necessity to carry along such big and heavy amplifiers, when using just 100W allowed us to achieve those performances.

Our stay was quite and safe inside the resort fence, protected and surveyed by guards. But life outside is a different thing: Togo is a very poor country, the life style is very low. To those of us who went outside the resort, the living conditions revealed to be precarious, just a little mitigated by the efforts of laics or religious missionaries, many of them Italian and some of whom we could meet.

Watching the lake we could see the pirogues fully loaded with passengers, propelled with long wooden oars, a number of tired fishermen busy for the whole day dropping the nets into the water to get a few kilos of tiny fish or some crabs, and others into the water to the belt height, fishing with rudimental wooden poles.

There are some big and representative buildings, mostly belonging to the government, in the capital Lomè, and the majority of the population, 1 million approx of the 6,5 Togo inhabitants, lives in the capital in low and precarious buildings. The traffic is chaotic, mostly during rush time, there are plenty of small motorbikes made-in-China, often loaded over the imagination. Togo economy is based especially on agriculture, export of cacao and extraction of phosphate, of which Togo is one the major world producer.

The day of the completion of our operations arrived. Our flight was due to leave at 04,30 Sunday morning but we agreed with the resort management to leave at 19, as the drivers refuse to drive night time because it could be dangerous. We could not obtain to postpone our departure therefore we were prepared to wait almost the whole night inside the airport.

At 13,00Z on Saturday 24<sup>th</sup> we recorded the last qso, then we started to dismantle the three stations and to pack all our stuff. It was a nice surprise for us when Coco, his sister Sister Giannina and Don Lorenzo's uncle, offered to accompany us to help with the Customs operation and to wait together with us until departure time.

Lomè airport is not really crowded, there are just a few aircrafts landing and taking off during the day, therefore it was almost empty. Luckily the Customs office was open and, by waking up a pair of officers, we could clear our stuff and get back the caution they levied upon our arrival. Anyhow we could not refuse an "Italian gift" for them, which means a tip in Euro, which they expressly asked for. On the other hand we were allowed to drop our stuff into a Customs office, leaving us free to go out with Coco and company, and then to get back to the airport 3 hours before departure for the check in.

Stuffed into two cars, Coco, his sister, the uncle and some friends and relatives, together with the 6 of us, we started for a Lomè-by-night tour. We got immediately the impression that no one of the million inhabitants living in Lomè remained at home that night, as the streets were overcrowded and noisy. It was a sort of “beer festival” and outside the sheds an enormous quantity of motorbikes and cars were parked. A merry crowd was walking on the streets, sitting in the outdoor “bars” drinking, singing, howling to win the noise coming from the full volume deafening music broadcasted everywhere.

The “bars” are nothing else than wooden or steel plate covered sheds with wooden desks and benches on the raw earth. The hygiene is superficial, the noise is hellish. We were observed with curiosity, as is not usual to see a group of 6 white-skin guys walking around. Nevertheless we never had the impression to be unsafe, no one showed signs of hostility or aggressiveness against us, on the contrary, often somebody greeted us calling some soccer player’s name or some Italian team! After having paid a visit to a couple of those “bars” it was time to get back to the airport, where we could easily collect our luggage and check in, waiting to embark into the aircraft.

But it was not finish yet, a further surprise was waiting for us: we were intimidated by a security officer for a further check on some of our luggage as the X-ray screening showed something suspicious. It was the amplifier transformers, which we separated from the rig and packed into another box to optimize the weight. It was easy to clarify the situation but soon we discovered that the real scope of all this was to get from us a further “Italian gift”.

At 16 of Sunday, the Royal Air Maroc plane landed in Malpensa, and the cold weather of Milan welcomed us.

We can be proud for the over 55,000 qso made in a big proportion with handicapped equipment, a result that is much better than what we expected before our departure. Some other important dx expeditions were on the air in the same time as ours, the Dutch Antilles dissolution just created 4 new ones on the air together with us. We would have expected to face big problems to share the bands and to overlap the respective pile-up. Actually, it did not happen. We could manage the operations without suffering problems and without creating problems to the others.

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Finally, some statistics:

Total QSO	55,604
Net QSO (without dupes)	53,500
Unique call	19,984
USA	9,930
Italy	7,060
Germany	5,380
Japan	3,400
Spain	3,300
Russia	3,000
French	1,800

Further data are available by visiting our web page [www.i2ysb.com](http://www.i2ysb.com)

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