

Surveying in Rwanda...14 A.G. (After Genocide)

David N. Marquardt, ALS

BY the time most people read this, it will have been a short fourteen years ago that the most prolific genocide known to man took place in the beautiful, tiny country of Rwanda in central Africa. In April 1994, and in a little over 100 days, over one million innocent people were tortured and slaughtered in the most evil of ways possible, while the rest of the world turned a blind eye and a deaf ear; that is except for France, who purely for their own self-interests, knowingly and directly supported the existing extremist government and thus the genocide. It was both a civil war and a meticulously planned extermination.

To put everything into perspective—take the triangle of land defined by Calgary, Ft. McLeod and Medicine Hat, (about the size of Rwanda), add in mountains, volcanoes, steep valleys and some jungle, (it is called the Land of a Thousand Hills for a reason) such that one-fifth of the land is uninhabitable. Then, mix in six million more people and in a 100-day span, wipe out the entire city of Calgary at a rate of 10,000 per day, mostly by machete. Four million would go into exile into Saskatchewan and the USA. Oh, and one other tiny thing—all your immediate and extended family, relatives, neighbours and friends are involved as either killers or victims. Which side you were on, would depend if you are a true native Albertan or not.

For most of us, that is a totally ludicrous thought, and to make matters worse, at the end of that 100-day span, most everyone goes back to living in their same neighborhoods—mixtures of tiny crowded plots of land owned by killers and victims, but under a different government where there is a better measure of safety now.

Without any specific details or history, that is a pretty good likeness of what transpired in Rwanda fourteen years ago and the current living arrangements. What the media back then grossly mistakenly labeled as the “rebels,” were actually the good guys who eventually chased out the extremist government troops (bad guys) and the French-trained militia (Interahamwe—even worse than bad guys). With the extremist propaganda machine working at full-tilt, people were betrayed by friends, neighbours, family and even their own churches. For the why, the how, the inspiring true stories of survival, I would refer you to a few books, like “*Shake Hands with the Devil*” by Canadian General Romeo Dallaire, “*A Thousand Hills*” by Steven Kinzer, and “*We Regret to Inform You That Tomorrow We Will Be Killed with the Rest of Our Family*” by Phillip Gourevitch. Imaculee Ilibagiza’s chilling 90-day account of her own survival in her book “*Left to Tell*” is an ultimate definition of the word forgiveness, something that most of us would not be able to totally comprehend without God’s help. The award winning HBO movie “*Sometimes in April*,” puts together many of the horrific stories in these books and plays it out on the screen.

So what the heck am I doing there fourteen years later? And not once, but twice? Just a couple of site surveys...two more world projects with Engineering Ministries International Canada, www.emicanada.org (based in Calgary) and EMI-International, www.emiusa.org (based in Colorado Springs, USA). Our projects in Rwanda? In February 2008 to survey and design a centre for peace and reconciliation and this past June to survey and design a university/technical/business college primarily for the genocide orphans of Sunrise Orphanage School, www.mustardseedproject.org/section.asp?secID=7,

February 2008: Centre for Peace and Reconciliation—Kigali, Rwanda

Why something like this? The civil war and the concurrent genocide virtually wiped out Rwanda’s judicial system, as judges, lawyers, and all moderate government leaders and employees were the first to be killed by extremist government troops and the Interahamwe in the genocide. Yes, it was planned that way so the genocidaires would be free without any witnesses or a judicial system to accuse them when the extermination was complete. So today, with 250,000 of these ex-soldiers and Interahamwe in prison awaiting trial and in work camps and another 600,000 free on close probation orders, it would take an estimated 300-400 years of 24-7 judicial processing to work through these numbers.



What about the millions of victims’ families and survivors who are mentally still struggling with the evil black hole of the past? To get a true feel of the breadth, extent, and depth of this evil event, we visited the main Genocide Memorial in Kigali and two of the most notorious church massacre sites—Nyamata and Ntarama. No matter how much you read and think you understand the horrors, it slams you.

When the ultimate task at hand is the spiritual and emotional re-construction of a nation, the task is a dauntingly near impossible one by human standards. Hence a protected place of Spiritual Healing where these victims, and yes, perpetrators, and killers can get their lives back on track in a biblical perspective, similar to



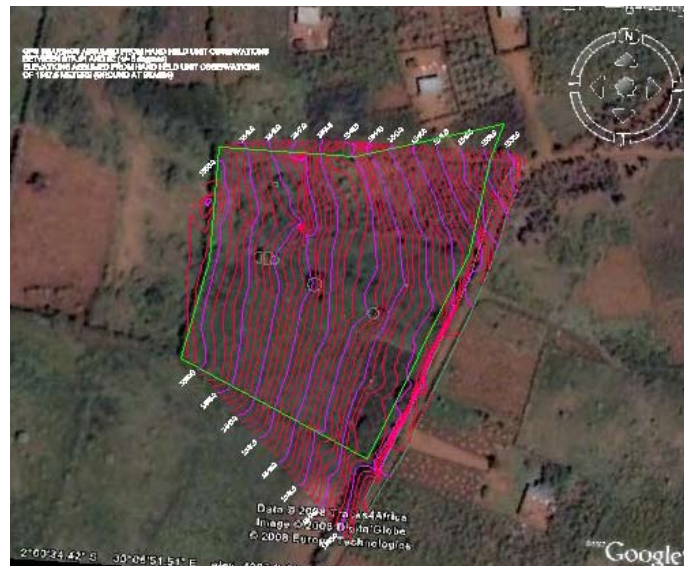
Above: In February, my daughter Ashli helped with the field notes.
Inset Above: Ashli, forever a magnet with the kids.

...there were no survey monuments to tie to and no control in this rural area south of Kigali the capital. How to orientate things with no real survey plans or maps?

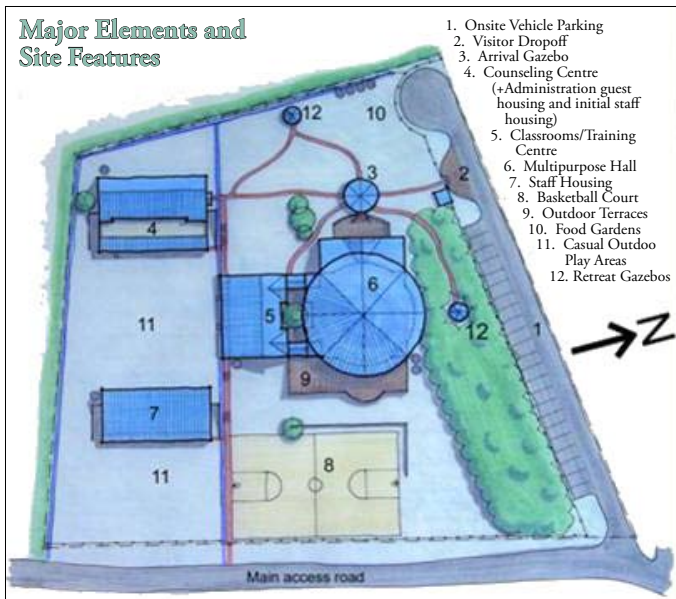
what the local Gacaca courts are currently doing. The amazing thing about this process is that it seems to be working. To most of you this sounds outright ridiculous, but remember, this is Africa, a continent of extremes. There are more devout Christians here than anywhere on Earth as well as despotic dictators and their followers who unfortunately seem to get all the headlines.

The survey was somewhat simple in perspective, 250-300 shots in a mixture of treed terrain and a cornfield, to determine grades, low areas for septic fields, flatter spots for activity areas and vegetable gardens as well as existing trees (mango, avocado, passion-

fruit) to be left in place. But there were no survey monuments to tie to and no control in this rural area south of Kigali the capital. How to orientate things with no real survey plans or maps? Three choices—one was a sunshot at about 9:30 a.m. which I had precalculated would be about due East. Well, I forgot we are on Rwandan time and some Rwandans are not too conducive to getting up early in the morning to drive anyone to a jobsite. Second choice—hand-held GPS observations on a series of traverse/control points, yielded bearings comparable (within 5-10 degrees of UTM grid). The third choice was to tie in roof corners of nearby structures visible in Google Earth, provided the imagery is of 2m resolution or better. In this case, it was and that is what we were able to do. What this allows you to do is to orientate your survey to something that is a close approximation to astronomic. When the survey was done, the engineers and architects took my DEM model and figured out where to put buildings, drainage, water and sewer lines, cisterns, electrical and activity areas. Watching them always was a time for learning something new.



Contour Google image.



An architect's concept of the future counseling centre - Building #4.

June 2008: Muhabura University/Technical/Business College Ruhengeri, Rwanda

The civil war of 1990-96, the main genocide of 1994, and the resulting HIV/AIDS pandemic, (another planned intentional torture inflicted by the extremist government troops), left more than 500,000 orphans in Rwanda. Understand one other chilling fact...95% of these orphans likely saw their parents and family killed during the genocide. Bishop John Rucyahana started Sonrise Orphanage School (www.mustardseedproject.org/section.asp?secID=4) in the hopes of giving some of these orphans the gift of a lifetime...a solid Christian education... to start at the roots and build lives up. It



Muhabura; Inset: A high resolution Google Earth image underlying our site survey.

has been a success beyond anyone's wildest dreams, except perhaps his. Originally started as a primary school (grades 1-4), it now has high school students set to graduate in 2010 with some of the best academic results in Africa. They need some place to go upon graduation, hence this Christian University/Technical/Business College.

Surveying in the shadow of volcanoes, about 20km from where Dian Fossey studied the massive mountain gorillas, (*Gorillas in the Mist*), was a daily distraction as were the torrential rains that swept down off the slopes of Mt. Muhabura.

If that wasn't enough, perhaps it was the 30-year old military base that we were surveying on, which was the parcel given up for this university-to-be. My first question before stepping out of Canada was, "Is there any chance of finding unexploded ordnance here and perhaps I should bring my Schonstedt metal locator to be sure?" No ordnance and thank you, my pin finder stayed home, but there were spent shell casings everywhere. This was by far the most intense project I had worked on at a size of nearly 25 acres and it was with good grace that a long-time friend and survey colleague Christopher Goldring (Can-Am Geomatics) decided that he had enough of my adventure stories and decided to come along and put a determined shoulder into the project. We also had fabulous help from three local fellows, who as it turned out, really got a hook about surveying.

By sheer luck, Google Earth had just input higher resolution imagery for this

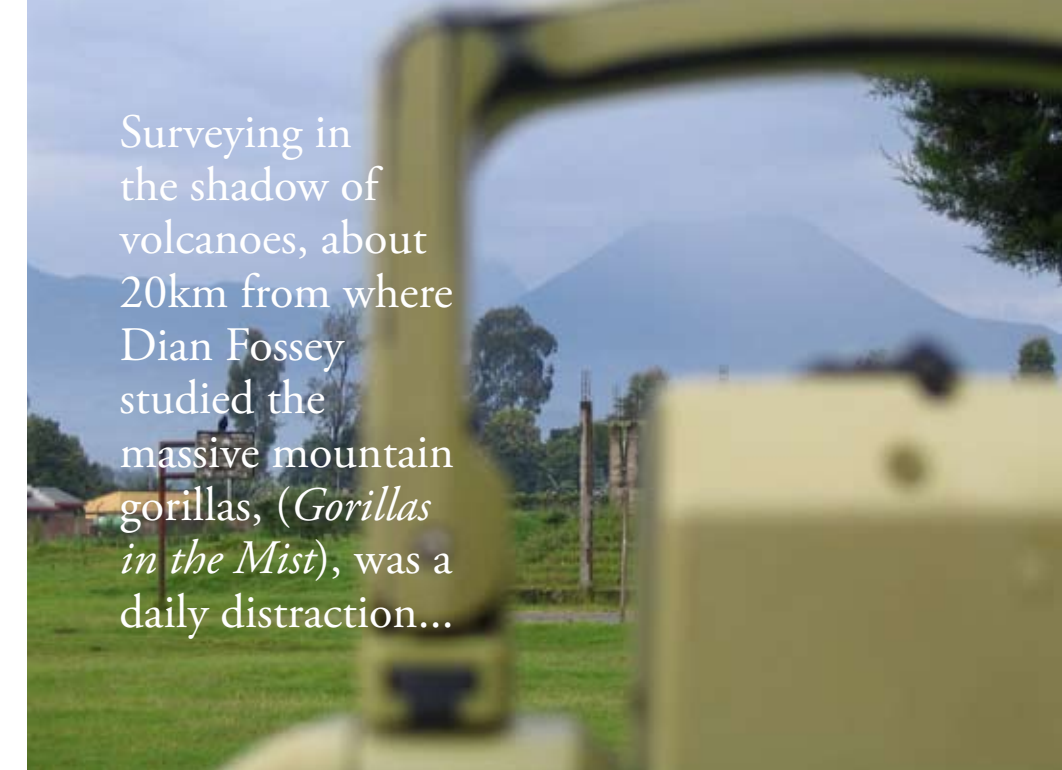


A 3D representation slide of Mahabura University used in our final "fly-through" presentation to Bishop John and the Rwandan Government.

area, on the day we actually left to go to Rwanda, and one of our American teammates was able to acquire it on his laptop and bring it over. Like before, we tied in several visible roof corners, and the resulting baselines gave us a scale factor for the image to fit into our ground survey, and an orientation for the ground survey as well with spectacular results, (see picture). Despite rain delays which, it seems, could fill a glass of water in 20 minutes, we shot in some 600 points in three days. Like similar projects here in Rwanda, there is no property corner monumentation, and as a surveyor, accepting lines of long-time possession carry much weight. The recent surveys done on both these projects did not fit with ours or what was evident in the field and in this case the area was almost one acre different.

The final presentation of this special project was to a who's-who in the Rwandan Government, with the exception of President Kagame who was in

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South Korea, at a packed dinner gala in the panoramic convention room, upstairs in the Hotel des Mille Collines (Hotel of a Thousand Hills, ...yes, the real Hotel Rwanda), in the capital, Kigali. As I stood looking out the window over Kigali and down at the infamous pool that was the reservoir of drinking water for the 1,300 people besieged in this hotel during the 100 days of genocide, as beautiful as it is now, I couldn't help thinking of the stacks of corpses that would have been visible 14 years ago, the screams of slaughter, and the smell of death, that would have permeated the air...and how good we have it here at home.



A cherished gift. We gave out small Canadian flags to many of the children we met.



It's a routine for the children that are not able to go to school to do what it takes to survive. This little one is gathering firewood for cooking.

So much to do...so little time... Rwanda is called the Land of a Thousand Hills for a very good reason, it is very rugged and green...the jewel of Africa and I will say it is so incredibly beautiful, that it is very likely I will be going back on other projects in the future so long as I am able to keep up with the young ones and put up with the malaria pills!! While the numerous construction cranes in the capital city of Kigali show the outward signs of construction, deep wounds still remain for most, just below the surface of the warm friendly smiles that greet the foreign visitor. The physical scars of many of the twenty-somethings and older, the results of machete blows meant to kill, run deep,

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The author playing a game with orphans.

but not as deep as the emotional wounds left by the inexplicable hatred and betrayal. Older people were very friendly, but guarded; the younger ones, much more open and the kids were always an absolute joy. If you are visibly Canadian, it is safe to walk the streets...even at night.

When we were not working on our project, there were other places and things to do: speaking with youth groups, spending time with the kids at Sunrise orphanage, and at Shyria Hospital, volunteering at Women's HIV ministries, helping out with a nearby fellow who made wooden prosthetics and another who made clay roof tiles, or hanging out with local groups frequenting the Bourbon St. Internet Café in Kigali.

One of the toughest things I have ever done in my whole life, was to speak to a youth group of about 30 boys and girls, between the ages of 16 and 24 on the importance of believing in and following God, having goals, dreams and finding a trusting mentor here on Earth (knowing full-well that some of these kids lost most if not their whole family since 1994). Then, to get home to a half-dozen emails from some of them, asking if I would consider being their mentor/father here on earth. I used to think I was having a brutal day when my traverse wouldn't close.

As they say in Kinyarwanda—Muracoze cheney—thank you very much—for taking the time to read. As always, if something like this interests you, by all means give me a call or an email. You will be challenged but not disappointed.

For some more great pictures and short videos, click on these PowerPoint links of the two trips. If you have 20 minutes to download and 20 minutes to watch...there are some awesome photos (www.midwestsurveys.com/alsa_emi_trip_5450-rwanda.htm and www.midwestsurveys.com/alsa_emi_trip_5464-rwanda.htm).

A special thanks to Jim Halliday ALS (Midwest Surveys) and Jim MacLeod ALS (Focus Surveys Limited Partnership) for their generous financial support and to Joe Longo ALS (Altus Geomatics) for the donation of 50 T-shirts that were given to Joy Rusitz, a tearful and very thankful Director of Sunrise Orphanage and School, Ruhengeri, Rwanda. ■

With gracious acknowledgement and thanks to EMI and all my team-mates.



A little girl and boy from Sunrise Orphanage and School. It's a picture and memory that will stay in my mind forever.

High Court Rules in Favour of Surveyors' Copyright

The following e-mail was sent to Ken Allred, ALS from Pat McNamaram, Director, Lean & Hayward Pty Ltd,

You may remember we corresponded on Copyright and Intellectual Property some years ago when you were on FIG.

The Australian High Court last week handed down a major decision on copyright for Surveyors, a significant 5-0 win confirming that not only do Surveyors own the copyright in their works but that the government DO NOT have an implied licence to use the material.

I have been running this project for 12 years for the Association of Consulting Surveyors NSW and presented a paper at the FIG Brighton Conference on the topic some years ago as well.

I have attached a media release and the web reference for the decision.

I believe this is the most important legal precedent to be set in the area of Intellectual Property for Surveyors and will have ramifications across the world. ...

Copyright Agency Limited (CAL)'s case for surveyors to have their copyright claims acknowledged has proved successful, with the High Court today overturning the Full Federal Court's decision that state governments had an implied licence

to use survey plans for free.

Surveyors have been concerned at the extensive use of their works for commercial purposes by state governments since 1997, and asked CAL to negotiate with State governments on their behalf.

CAL is an Australian copyright management company whose role is to provide a bridge between creators and users of copyright material. CAL represents copyright owners, including surveyors, as their non-exclusive agent to license the copying of their works to the general community, including government.

CAL began negotiations with state governments with respect to the use of surveyors' plans in 1997. A Copyright Tribunal application to determine payment was lodged in 2003, with the High Court application commencing in 2007.

Prior to the High Court application the Full Federal Court rejected a claim by the NSW Government that it owned the copyright in plans surveyors created and registered – but found that there was an implied licence allowing the NSW government to use the plans, without payment to surveyors.

CAL appealed the Full Federal Court's decision, on the grounds that the state's use of surveyors' registered plans are

subject to section 183 of the Copyright Act (Crown Copying Provisions), and therefore should be paid for.

Pat McNamara from the Association of Consulting Surveyors NSW, said that the ruling is good news for surveyors, and importantly, that it will not impede the management of the land title system in Australia. "The land title system in Australia is one which all surveyors hold dear to their hearts, and our intention has never been to compromise this process," said Mr McNamara. "However the decision does mean that the extensive unremunerated use of surveyors' work by government will cease, and surveyors will be recognised as creators, and rewarded for the use of their work."

CAL Chief Executive Jim Alexander said that the decision is a significant step for all copyright owners. "The High Court ruling acknowledges the importance of individual skill and input into survey maps and plans," said Mr Alexander. "On a larger scale the decision also acknowledges the importance in valuing creative works. It puts paid to the concept of an implied licence giving away the right to use works without remunerating the creator."

For more information log on to www.austlii.edu.au/au/cases/cth/HCA/2008/35.html.

Real Property: EASEMENTS—Applicant was granted a declaration that it had an easement over a laneway on the northerly part of respondent's property.

Application for a declaration of an easement for vehicular access over a laneway on the northerly part of property owned by respondent. Applicant purchased a property in 2005 from S, who bought it in 1978. There was a two-storey brick building on the property and a parking lot at the back. The only access from the street to the parking lot was the laneway. S and his visitors had full unimpeded use of the laneway. S entered into an agreement in 1984 with the previous owners of respondent's property acknowledging S's right to use the laneway for ingress and egress from the parking lot. A further agreement was signed in 1987 to accommodate the developer of a proposed condominium project providing that S would have permanent access to his rear

property and receive financial compensation in return for his consent to the proposed construction and that the easement would survive any transfer of his interest. In 1990, S registered a copy of the agreement against title to the condominium property.

HELD: Application allowed. The 1987 agreement was only an "agreement to agree" and was not enforceable. However, applicant's claim met all the criteria of an easement. There were dominant and servient tenement belonging to different owners. The exercise of the easement was for the use and benefit of the dominant tenement. Without access to the back of the property by way of the disputed lane, applicant could not make use of the attached parking lot for its building. The

claim was capable of forming the subject matter of a grant. In exchange for agreeing to withdraw any objections he had to the proposed condominium development and refrain from impeding the construction, S's claim to the use of the laneway over respondent's property gave rise to an easement on the basis of proprietary estoppel. When applicant as a good faith purchaser obtained the land, such easement flowed with the title.

433583 Ontario Ltd. v. Metropolitan Toronto Condominium Corp. No. 935, [2008] O.J. No. 2095, Ont. S.C.J., Jarvis J., May 28/08. Digest No. 2810-019 (Approx. 6 pp.)

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