

# Young Surveyors beyond Horizons

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## SUMMARY

*“Involve me and I will understand”*

Young surveyors are a minority group within the surveying profession – and this is never more evident than at organizational meetings, FIG Congresses and Working Weeks. And if young surveyors themselves are a rarity in the profession, then young surveyor active participation is nearing extinction. So why are our young surveyors so disinterested and uninvolved?

This paper contends that the issues of the surveying education crisis, professional identity and young surveyor promotion and involvement are all interlinked – and all dependent upon supporting our young surveyors. The promotion, identity and integrity of the profession is dependent on happy, healthy surveyors – who spread word of the profession and its capabilities to friends, family, colleagues and clients. Such surveyors are well-supported, mentored and have voices able to be heard in arenas such as the FIG.

In line, then, with the aims of the FIG2010 World Surveying Congress – Practice, Partnership & Unity – and with the support of the Sydney Congress Organising Committee, a weeklong event has been created under the project title: “Young Surveyors beyond Horizons”. To be run in the week preceding the FIG2010 World Surveying Congress, this event was established with the aims of encouraging and enabling young surveyors to attend FIG2010.

Young Surveyors beyond Horizons (henceforth YSBH) is to consist of a number of activities which add value to young surveyor attendance by aiding them to build skills, create networks and experience the unique challenges of surveying across the Australian outback – both in the present and the past.

This initial paper introduces the YSBH project, in light of growing concern of young surveyor numbers and industry participation. The need for such projects is assessed, including the key motivations and aims of this project, and the key difficulties which may be preventing young surveyors from entering or participating further in the surveying profession.

It is hoped that this paper will increase awareness of “Young Surveyors Beyond Horizons” and facilitate understanding, further interest in and support for the young surveyors of the future.

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## 1. INTRODUCTION

*“Public perception is fundamental because it affects both the recruitment of the next generation (and its intellectual calibre) and the employment of the practitioners.”(Mahoney et al. 2007)*

The changing face of the surveying profession has been much discussed in recent years – the fast uptake of technology revolutionizing the traditional surveyor, and the student crisis *perhaps* about to revolutionize the industry as a whole. Both factors are seriously affecting, and importantly **affected by** the image and identity of surveyors – both from within the profession, and the perception from the community without. Low public perception of surveying, and awareness of the professions capabilities and areas of application, is significant to declining student enrolment in surveying – and this is also seen across the majority of engineering disciplines in Australia.

To combat low student uptake, organizations in Australia have put considerable energy towards marketing campaigns, including significant industry sponsorship (both time and financial) focused on high school and university students. In contrast, what has not had such a high priority is the support for young surveyors once they enter the industry as graduates and professionals.

In Australia, the traditional route for a graduate surveyor is to follow the path to registration (for primarily cadastral surveying work) – and for this route there remains substantial institutional support, although individual employer support varies. With the changing identity of surveyors, however, this no longer enough – with such singular support a potential perpetrator to the confusion over surveying identity. Students are educated across a variety of disciplines during their surveying course; however the onus remains upon them to determine what surveying careers are open to them. There may be significant industry support for the university, however unless it encompasses the breadth and depth of the profession, the identity crisis will continue, as students are only made aware of narrow industry disciplines. The issue continues with graduates – a significant number remaining with the same employer who sponsored their internship, summer placement, or part-time work. These employers constitute the local, ‘visible’ element of surveying.

The “invisible” element of surveying can only be discovered through the advent of professional networks, mentors and conferences in a young surveyor’s career. It is through networks that the young surveyor hears about alternate jobs on offer and other surveying disciplines in the area, and it is through **conferences and workshops** that he/she discovers how little was previously known about the breadth of the profession(!).

But conference and workshop attendance is often expensive – both in physical cost, and in loss of manhours contributing to the business. Thus, especially in small businesses, it is often restricted to the domain of 'the boss' or employees with a water-tight business case to attend. In these cases the knowledge transfer often does not trickle down to the young surveyor – and the advantages of creating and maintaining a professional network and discovering an *identity* within the profession are lost.

## 2. YOUNG SURVEYOR INVOLVEMENT

The low young surveyor participation rate in the industry, however, is not simply a function of employer or industry neglect. The young surveyor has to want and be responsible for his/her own development – and the generational gap in surveying has some responsibility here also.

Generation Y is described as the generation born from the 80s-90s – the current generation then entering, or soon to enter university and/or the workforce (Dirrell, 2006). This generation is generally labeled the 'technology' generation – people of this generation tend to be more technologically aware, and more capable (and quick!) in the uptake of technology innovation. Additionally, they are often described as selfish and driven – this generation knows what it wants and generally how to get it (Dirrell, 2006). Generations are, however, culturally dependent – so generalizations such as the above may be more applicable to the US and other Western countries.

So in the case of young surveyor participation, or lack thereof, substantial blame must lie upon the young surveyors themselves for not providing sufficient 'push' from supporting organizations such as FIG and the Institute of Surveyors Australia. From such a 'driven' generation however – why are they not more interested?

The main factor appears to be awareness – awareness of such organizations as the FIG, and their contributions to the profession. Specifically: what does FIG contribute to me? O'Connell (2006) notes that "young surveyors today want more than the regular journal and meetings to discuss prominent issues". This 'selfish' generation needs to know, understand and appreciate the benefits of an organization. Essentially, the role and benefits of the FIG needs to be marketed to them. This lack of awareness is further demonstrated by Mahoney et al. (2006), where poor conversion rates from RICS student membership to professional members have been recorded.

The inclusion of students as a major agenda item in FIG, with the issue of attracting students outlined in the FIG Council's schedule for the term 2006-2010, and the establishment of the Commission 1 Young Surveyors Working Group in 2006 has made a serious start in promoting the concerns of young surveyors in the FIG arena (Kivilcim & McAlister, 2008). Yet again, it is more student-aware than generally young surveyor-aware (due predominantly to the current working group demographic) – but the groundwork has definitely been laid with respect to promoting the benefits of FIG to younger members of the profession. It is now

simply a task of ensuring that FIG environs are conducive and relevant to young surveyors and the surveying ‘identity’ of the future.

Finally, of further import is the following from Mahoney et al. (2006) – “anecdotal evidence from the UK indicates that a relatively high proportion of surveying students are encouraged into the profession by personal contact with a practicing surveyor...”. Whilst there is no direct evidence to support this, there is definitely a need for further research. Essentially the message is that *a happy surveyor depicts a healthy and profession and a supported individual* – so support for our young surveyors is vital to create and market this image.

### **3. YOUNG SURVEYORS BEYOND HORIZONS**

The Young Surveyors beyond Horizons (YSBH) project was initiated with a view to encourage and support young surveyors to attend the FIG2010 World Surveying Congress in Sydney.

The project will see a series of technical activities held throughout Australia, targeting the application of Surveying knowledge and technology. Attendance will be marketed towards young surveyors, adding value to the potentially long and expensive journey to Australia. A number of experienced and professional surveyors will be invited to attend, building on the mentorship program of the FIG1.2 Young Surveyors Working Group and fulfilling further networking aims of the FIG Congress.

Activities are intended to be either

- Real projects contributing to local communities
- Real projects derived from industry research and development foci
- Historical projects demonstrating the contributions of the surveying profession to Australia

For sustainability of the project, it is important that activities are seen to benefit not only the young surveyors attending (as in a pure educational exercise), but additionally the local communities and corporate industry members where possible. This aim will further the ‘visibility’ and image of the profession in Australia – with targeted marketing, and potential media interest to help.

#### **3.1 Main prohibiting factors to young surveyor FIG2010 attendance**

A number of factors contributing to the low levels of young surveyor industry involvement have been discussed so far, not the least a lack of awareness of the benefits of membership in such an organization as FIG. These factors are further outlined in Table 1.

<i>Prohibiting factor</i>	<i>Explanation</i>
Lack of awareness	Of FIG Of FIG conference themes, dates and locations Of surveying profession and discipline opportunities Of avenues of support within industry
Lack of interest	Stemming from a lack of awareness
Lack of direction	(Some) Graduates are inexperienced in the professional world, and thus less confident in seeking funding for conferences etc.; Direction, such as mentoring, may be required for graduates to determine what additional activities will most benefit their professional development; Where opportunities do not exist (eg. Young surveyor representative bodies), limited awareness of what can be done to rectify. Lack of scope and concern that the 'problem is too big' or 'it's too late now'.
Employer support	Similar to direction, without specific/directed employer support graduates are unlikely to be motivated (there appears to be less professional value in attending)
Cost	Attendance fees for many conferences are prohibitive without a strong business-specific case
Location	FIG in particular is perceived as Euro-centric (eg. There is limited awareness of FIG activities amongst students/young surveyors. Situation has improved considerably with FIG2010, however at cost to European young surveyors who are now impeded by cost.)
Network	There is less (social) incentive to attend without a skeleton network already in place

**Table 1:** Prohibiting factors to young surveyor involvement and attendance

From these prohibiting factors, three key motivating factors were derived in the development of YSBH:

- Improving young surveyor participation in FIG events
- Improving employer support of young surveyors professional development; and
- Improving the visibility of the surveying profession

These are discussed below.

### 3.1.1 Low young surveyor participation in FIG events

To date, the FIG has limited documentation pertaining to young surveyor attendance in the past, yet anecdotally, a cursory glance around any FIG event would support the idea of an aging profession(!). With the strong research themes, doctoral students presenting papers would be expected to outnumber young surveyors. Data from the FIG2007 Working Week in Hong Kong shows approximately 4% of attendees were students (and this includes members of the Young Surveyor Working Group).

The main contributing factors to low participation have been listed in Table 1:

- Cost
- Location (for non-national students)
- Awareness

### 3.1.2 Limited Employer Support for Young Surveyors

Employer support of the professional development needs of young surveyors is, of course, business and results driven. Employers are therefore much more likely to support young surveyor attendance of FIG events if they can see direct benefits relating back to their specific business discipline.

Student attendance is strongly linked to paper presentation (for which they can gain funding). Of the 4% student attendance at the FIG Working Week in Hong Kong, all but the members of the Young Surveyors WG1.2 were listed as presenters.

Young professional surveyors, whilst FIG attendance is as yet undocumented, appear less likely to write papers for conference presentation – this most probably stems from a lack of experience, time to adapt to their position, time required to conduct research/write the paper and business focus of work (versus the perceived academic focus of the FIG).

Networking benefits, such as attendance at associated trade fairs (eg. Intergeo), are greater for more senior employees who have more experience – and decisions such as the adoption of new technology are less often made by new employees.

Further study of the FIG attendance demographic is certainly required to address these issues.

### 3.1.3 The low profile of Australia's surveying profession

Mahoney et al. (2007) and Hannah (2006) both note the low public profile of surveying, specifically in Australia. Where the law and medical professions are renowned within communities, the general public is often unaware of when they would require a surveyor or indeed, what other fields or disciplines surveyors may be involved. High school students are largely unaware of the broader engineering disciplines, and are often of the belief that surveying would largely restrict a career to the construction fields.

Hannah (2006) lists the lack of public profile associated with the surveying profession as a primary cause of the skills crisis. Lack of identity within the profession, however, further contributes to society's limited surveying awareness.

This low profile is certainly not unique to Australia, with the UK Royal Institute of Chartered Surveyors ([www.rics.co.uk](http://www.rics.co.uk)) documenting similar trends in the UK. It significantly affects the number of students and young surveyors entering the profession, as well as the specializations they follow on graduation. O'Connell (2006) discusses the impact of the current skills shortage with respect to Hydrographic surveyors – citing a lack of definition in the role of the profession as a leading cause of a low public profile.

Further of note,

### **3.2 How to Address these Issues?**

#### **3.2.1 Cost**

With the FIG2010 World Surveying Congress to be held in Sydney, Australia, cost is a significant issue for international attendees.

YSBH aims to address this by 'adding value' to the congress – at minimal additional cost. YSBH activities aim to cover a broad number of disciplines which come under the heading 'surveying' – and enable the building of skills across a broad range of technologies, from now and in the past. Activities will of course have an Australian 'spin', and as such it is hoped that there will be a considerable number of new technology applications that will inspire attendees when they return to their base locations.

It is further hoped that YSBH, in boosting the profile of surveying and in its promotion of young surveyors, will attract significant sponsorship to further reduce costs. Note that as yet, nothing has been confirmed.

#### **3.2.2 Employer Support**

In line with 3.2.1, it is hoped that the added value of attendance at one of the YSBH activities will improve employer support – whether through time-off to attend the event, or sponsorship to attend. Each YSBH will have clearly identified aims with regards to skill- and knowledge-building, targeted at providing business value.

In line with creating sustainable networks for young surveyor participants, YSBH will invite key professionals to lead and attend activities. Networking will be both structured (as in the FIG Stockholm 2008 Working Week "Speed Dating" – Kivilcim & McAlister 2008) and unstructured – thus furthering the benefits of attendance, where employees can promote their own workplace and activities.

Enemark (2007) notes an international trend in the surveying skill base from traditional technical skills to a wider scope including “the interpretation and management of data meeting the needs of clients”. YSBH intends to address this through experience-focussed learning and emphasis on the project (activity) life and final reporting – adding business value to young surveyor attendance.

Additionally, YSBH could introduce a key deliverable that participants will present findings or outcomes of their activity during the Congress. This would give participants further experience in conference presentation and may encourage future involvement. Further, by simply attending the congress and reporting back to employers, participating young surveyors will gain the chance to physically demonstrate the value of their attendance – the outcome dependent on their efforts.

### 3.2.3 Low Profile

By aiming for high profile, high benefit projects, YSBH will aim to generate as much media interest as possible – furthering the profile, if not the identity, of the surveying profession. All forms of media will be actively targeted to maximize coverage – particularly forms that are most used by this generation, for example Facebook, podcasts and GoogleEarth.

Where possible, projects will aim to benefit and involve the communities in which they take place – creating localized ‘visibility’ of the surveying profession.

If implemented, the presentation deliverable outlined above should further create awareness within FIG the benefits of such a project, the benefits of actively involving young surveyors and an awareness of the breadth which a universal identity for surveyors needs cover.

## 4. CONCLUSION

The Young Surveyors beyond Horizons project is still in a project planning and identification phase, however there is much positive support from the profession, and with the motivation of team members the project looks promising for 2010.

YSBH aims to create and improve young surveyor awareness of FIG activities and the wealth of surveying disciplines by actively involving young surveyors and creating an environment conducive to the creation of sustainable networks. In the creation of high profile, media-seeking survey activities that benefit the community, Young Surveyors beyond Horizons will aim to heighten the profile of surveying within Australia and build on the professional ‘pride’ strived for by such organizations as FIG and it’s member associations.

It is intended that the Young Surveyors beyond Horizons project, in addressing the main barriers to increased young surveyor involvement be envisioned as a stepping stone to greater integration of young surveyors within FIG. Updates on project progress will be submitted to future FIG events, with the overall success of the project evaluated and reported upon according to identified deliverables.

Finally, this paper has indicated a number of areas for research and monitoring within FIG, with regards to young surveyor involvement. Future FIG events should record details of attendees, either via registration or survey, to act as indicators of the success or failure of current targeted efforts. Without such data, any assessment of young surveyor involvement will remain incomplete.

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## BIOGRAPHICAL NOTES

Kate Fairlie BEng(SISS)

**Kate Fairlie** as a recent graduate of the University of New South Wales (UNSW) admits to being a Gen Y’er. She has a Bachelor of Engineering (Surveying and Spatial Information Systems). Throughout her university degree, Kate was awarded a number of awards and scholarships, including the UNSW Coop Scholarship which led her to work placements with the New South Wales Department of Lands and a Sydney cadastral surveying firm. Kate is currently working for the GeoInformation division of Shell United Kingdom Exploration and Production, following an internship with Shell International EP in 2006.

Kate has been involved in a number of young surveyor and young engineer activities, including being an Engineering Ambassador for UNSW – promoting engineering as a career to high school students in Australia. She is a member of the FIG Commission 1.2 Young Surveyors Working Group, and has been active in the NSW division of the Institute of Surveyors Australia, the Spatial Sciences Institute of Australia and Young Engineers Australia. Kate has organized a number of New Professional and Student networking and development events within Shell – and is looking forward to Young Surveyors beyond Horizons!

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