Review of SGA + NOG Data

16 messages

Mark Tinka <mark.tinka@seacom.com>   Tue, Nov 22, 2022 at 10:04 AM
To: Etienne-Victor Depasquale <edepa@ieee.org>, Saku Ytti <saku@ytti.fi>

Hi Etienne.

Saku has graciously accepted to review the SGA and NOG data from the recent survey you conducted.

I have briefed him on the work you have been doing around this, and the relative difference between both data sets you have received.

I am sure his eyes will be most helpful to you, as you work through it.

I'll leave you both to it. Thanks.

Mark.

Etienne-Victor Depasquale <edepa@ieee.org>   Tue, Nov 22, 2022 at 10:41 AM
To: Saku Ytti <saku@ytti.fi>
Cc: Mark Tinka <mark.tinka@seacom.com>

Many, many thanks, Saku, and of course to Mark for establishing this precious contact.

I'll revert by this evening at the latest with details to access the Jupyter notebook server and the Google Analytics.

With sincere thanks,

Etienne

[Quoted text hidden]
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Ing. Etienne-Victor Depasquale
Assistant Lecturer
Department of Communications & Computer Engineering
Faculty of Information & Communication Technology
University of Malta
Web. https://www.um.edu.mt/profile/etiennedepasquale

Etienne-Victor Depasquale <edepa@ieee.org>   Tue, Nov 22, 2022 at 10:48 PM
To: Saku Ytti <saku@ytti.fi>

Hello Saku, and thank you again for sparing your world-class expertise to this work.

I have set up a Jupyterhub notebook server for your use and created a user account named "saku.ytti" (without double quotes).
The password assigned to your account will be that which you enter (just once) on first use.
The server can be found at https://tljh-ict.research.um.edu.mt/
(I work at the University of Malta).

On gaining access,
you will find a series of questions which have been answered
both through NOG response and through market research (SG Analytics).
There are 70 NOG responses, and 30 responses from SGA.
The SGA responses have been guaranteed to be unique and "Tier 1" - equivalent (e.g. Telefonica, Deutsche Telecom, Vodafone).

With regard to the NOG data, I can also show you the analytics directly assembled by Google:

they are at https://docs.google.com/forms/d/1kJnEjukNDGC4JARuhgBI0HUUrQ8UNA-G71Aa6heaK8U/viewanalytics
The latter link has been opened temporarily.

I am eagerly looking forward to your evaluation and am at your disposal for any clarification necessary.

With sincere thanks and regards,

Etienne
[Quoted text hidden]

Etienne-Victor Depasquale <edepa@ieee.org>   Mon, Nov 28, 2022 at 7:23 PM
To: Saku Ytti <saku@ytti.fi>

Hello again Saku :)

Without wishing to appear rude or rushing you,
would you be able to give me some rough estimate of
when you might be able to give me some idea of your thoughts?

Best regards,

Etienne
[Quoted text hidden]

Saku Ytti <saku@ytti.fi>   Mon, Nov 28, 2022 at 7:31 PM
To: Etienne-Victor Depasquale <edepa@ieee.org>

My apologies, I'll try to access the data tomorrow.

I was explaining to Mark how I am skeptical of the utility of 'help'.

Let's say I don't agree with the data quality, then what can you do?
What avenues are there to improve the data quality? I don't think
there is any reasonable mechanism. So the easiest answer is 'well
thank you for your insight, I'm going to go with this data, because my
supervisors will accept SG Analytics, but won't accept Ytti or Tinka
nor can I explain the inherent futility of getting reproducible and
actionable input data for these questions'.
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  ++ytti

Etienne-Victor Depasquale <edepa@ieee.org>   Mon, Nov 28, 2022 at 8:11 PM
To: Saku Ytti <saku@ytti.fi>

> My apologies, I'll try to access the data tomorrow.

Not necessary, rather, I think I might understand how pressed you are for time. Thank you for sparing your precious
time !

> Let's say I don't agree with the data quality, then what can you do?
> What avenues are there to improve the data quality?

Happily, there might be :)
SGA have agreed to set up three interviews with some people of your calibre (or probably less, seeing your
reputation)
so that I can have qualitative research that shores up a gap or twenty (as I like to say :D)
in the data.

Best regards,

Etienne

[Quoted text hidden]

Saku Ytti <saku@ytti.fi>   Wed, Nov 30, 2022 at 9:27 AM
To: Etienne-Victor Depasquale <edepa@ieee.org>

Many of the answers don't render for me. Is this issue on my end?

I get:
NameError: name 'parsers' is not defined

But the working ones don't seem to import parsers either.

If I manually add:
from fn_operators_lib import strings,parsers
histogramBins = 20

Any which doesn't render, it starts to render.
[Quoted text hidden]
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  ++ytti

Näyttökuva 2022-11-30 kello 10.24.21.png
383K

Etienne-Victor Depasquale <edepa@ieee.org>   Wed, Nov 30, 2022 at 9:45 AM
To: Saku Ytti <saku@ytti.fi>

Sorry Saku - the first cell has to be run first before any other cell is run.

I should have stated that upfront.
So no, it's not your issue but my forgetfulness.
I had told that to Mark and my PhD supervisors but not to you.

Best regards,

Etienne
[Quoted text hidden]

Saku Ytti <saku@ytti.fi>   Wed, Nov 30, 2022 at 10:26 AM
To: Etienne-Victor Depasquale <edepa@ieee.org>

NOG answers align more with my perception, but I don't think that matters.

Is there research that suggests that questionnaires can work? Shooting
off oneliner questions, and hoping the person who answers is in
position to answer it, understands the question and understands what
they are doing and where they are going?

If you'd ask these questions from NTT GIN people, and you'd pose them
to different people like SVP, VP, Director, PE, Engineer. You'd get
different answers from each, and even different answers from
coworkers. And if you'd do the questionnaire again tomorrow, you'd get
different answers.
We also company-wide have a very poor understanding of basic
principles of what we do, who our customers are, and what is driving
business. And this is the same for every company in the world. And I
think this is expected, because most people can't be very good at
their job, due to normal distribution and empirical rule. They may be
able to solve the acute well-specified problem they are facing right
now, but this kind of forward looking, introspective requirement your
questionnaire poses is simply too hard for almost everyone. The more
senior you are, the more confidence you have, regardless of competency

level, so you'll very confidently tell an interesting narrative you
just came up with.
It is a common internal topic in every company, whenever their C title
people give public talks, how they have no idea what the company is
doing, and are completely out of touch.

I've been part of several RFP/RFQ tenders on both ends, customer and
vendor. And they are always a GIGO process, When we do them as
customers, we don't pass any internal acid test, our internal people
disagree with the meaning of the questions we give to vendors, and the
vendor has no hope of understanding them correctly. When I've done it
as a vendor, I have no idea what a customer means, and I've always
just been instructed to answer what I think they mean.

But when we have an actual problem, as either vendor or customer.
Coming into common understanding of what the problem is, takes a lot
of back and forth communication, and usually the people originally
involved won't be involved, because they won't be able to solve the
problem, but it'll get escalated.
Actual problems are a good benchmark, because they need to be solved,
so you can get a good insight into what it actually takes to solve it.
Questionnaires are collections of problems that are poorly defined,
answered by someone who doesn't understand them, and even if they did,
they don't really know what their company is doing and is going to be
doing going forward.

I would personally reject entirely the approach of asking people, I
don't think it's possible to get signal from the noise. And I would
consider what else I can do, what is my actual problem and are there
some other avenues to solving it, other than asking people. Maybe if
your sample size would be near 100% of everyone working in the
industry, the mean answer would be near the truth.

Without understanding what is the actual problem you have, where the
answer is 'lets send a questionnaire', I'd consider, could for example
company 10Qs provide answers? What are companies selling? How much in
a given year? What is being sold more? What is being sold less? After
all, we need to buy something to build something.
[Quoted text hidden]
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  ++ytti

Etienne-Victor Depasquale <edepa@ieee.org>   Wed, Nov 30, 2022 at 11:21 AM
To: Saku Ytti <saku@ytti.fi>

Saku, thank you for your detailed reply.
I am going to risk continuing the conversation.
Please do see my replies purely as engaging in discussion.
I do not intend in the slightest to dismiss the validity of the concerns you raise,
but only to suggest counterpoints to these concerns.

> Is there research that suggests that questionnaires can work?
No, I haven't investigated that issue.
I've based this approach on the Informa group's modus operandi,
which is predicated upon questionnaires and reports that they produce therefrom.
At best, what I can write "off the bat" is that their continued operation must attest
to the validity of the questionnaire as a means of obtaining information.

> Shooting off oneliner questions, and hoping the person who answers is in
> position to answer it, understands the question and understands what
> they are doing and where they are going?
 The data is obtained from people who state their position.
I don't show it in the Jupyter notebooks, but the positions are shown
in the Google Analytics page I had shared with you and
their decision-taking status is shown there too.
I would dare claim that the respondents meet your criteria, with very few exceptions.

> If you'd ask these questions from NTT GIN people, and you'd pose them to different people like SVP, VP, Director, PE, Engineer. You'd get different answers from each, and even different answers from coworkers. And if you'd do the questionnaire again tomorrow, you'd get different answers.

Yes, that's undeniably possible.
I would qualify that claim with the following criteria:
(a) is the question tending towards the objective or towards the subjective?
(b) does the impact of opinion matter?
(c) how stable is the tenure of an opinion likely to be?
(d) if an opinion is unstable, is there any value in obtaining a snapshot of the opinion?
With these criteria in mind, one can concede that
some questions are clearly objective
(e.g., which access technologies do you use to serve subscribers),
while others are clearly subjective,
(e.g., I would consider adding video BNGs closer to the end user ...).
In the case of the subjective,
stability of opinion matters (hence the validity of your remark about tomorrow's opinion), but
that in itself does not preclude the momentary value of a sample of such opinions.
I suggest that it has momentary value on the premise that
this study is not meant to be a timeless statement.
It is meant to show the status quo at a point in time,
and that itself is a useful data point.
For clarification: I recall (but don't offhand remember which) that some questionnaires are annual
and intended to have value as part of a chronological series.
The problem of my area of study is that there is no such basis as yet, and
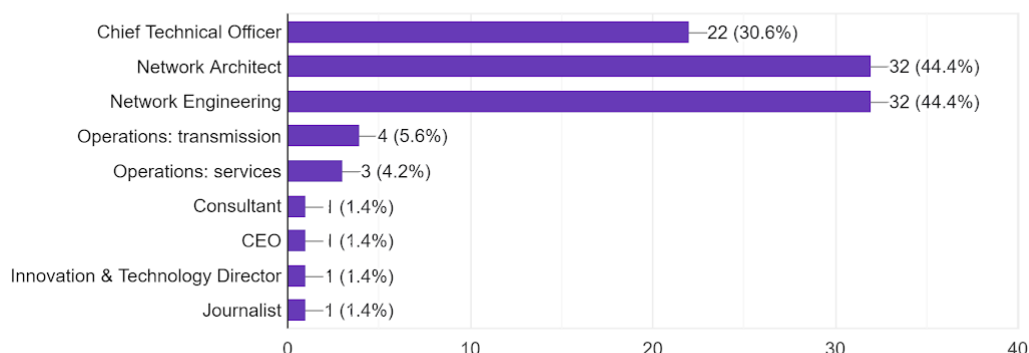I would like to contribute to its insemination.

> We also company-wide have a very poor understanding of basic principles of what we do, who our customers are, and what is driving business. And this is the same for every company in the world. And I think this is expected, because most people can't be very good at their job, due to normal distribution and empirical rule. They may be able to solve the acute well-specified problem they are facing right now, but this kind of forward looking, introspective requirement your questionnaire poses is simply too hard for almost everyone. The more senior you are, the more confidence you have, regardless of competency level, so you'll very confidently tell an interesting narrative you just came up with.

Indeed, most of my respondents are senior (see graphic extracted from Google Analytics).

Please identify your role in your organization.
72 responses

Role	Count
Chief Technical Officer	22 (30.6%)
Network Architect	32 (44.4%)
Network Engineering	32 (44.4%)
Operations: transmission	4 (5.6%)
Operations: services	3 (4.2%)
Consultant	1 (1.4%)
CEO	1 (1.4%)
Innovation & Technology Director	1 (1.4%)
Journalist	1 (1.4%)

> It is a common internal topic in every company, whenever their C title people give public talks, how they have no idea what the company is doing, and are completely out of touch.

88.8% of my respondents are network architects and network engineers ... what do you think of that?

> I've been part of several RFP/RFQ tenders on both ends, customer and vendor. And they are always a GIGO process, When we do them as customers, we don't pass any internal acid test, our internal people disagree with the meaning of the questions we give to vendors, and the vendor has no hope of understanding them correctly. When I've done it

> as a vendor, I have no idea what a customer means, and I've always
> just been instructed to answer what I think they mean

Admittedly - garbage in, garbage out.
But I hope that at least most of my questions are pointed, with little scope for ambiguity.
I will also add that I passed this through technical people like Mark before publishing it.

> Coming into common understanding of what the problem is, takes a lot
> of back and forth communication,

Excellent. Classical philosophy is predicated upon discussion - unike Descartes's "*cogito ergo sum*" and his modern philosophical adherents.
I did try to engage in limited discussion (see the earlier point about discussing with Mark).

> I would personally reject entirely the approach of asking people, I
> don't think it's possible to get signal from the noise. And I would
> consider what else I can do, what is my actual problem and are there
> some other avenues to solving it, other than asking people. Maybe if
> your sample size would be near 100% of everyone working in the
> industry, the mean answer would be near the truth.

I'll probably cite this, following Thomas Aquinas, and see whether my counterpoints convince my readers otherwise.

> Without understanding what is the actual problem you have, where the
> answer is 'lets send a questionnaire', I'd consider, could for example
> company 10Qs provide answers? What are companies selling? How much in
> a given year? What is being sold more? What is being sold less? After
> all, we need to buy something to build something.

Useful point. Indeed, I think that Jonathan Koomey's work uses shipments.
I'll reflect upon it and see whether I can use it or not.

Thank you, thank you, thank you.
I am deeply indebted and would love to continue the conversation.
Please let me know should you be in need of my humble help.

Warm regards,

Etienne

[Quoted text hidden]

Etienne-Victor Depasquale <edepa@ieee.org>   Wed, Nov 30, 2022 at 1:07 PM
To: Saku Ytti <saku@ytti.fi>

Two corrections, sorry ...

(a) 70% of respondents are architects and/or engineers (more than one choice was possible in that question)
(b) I will only cite anything that you permit me to.

Cheers,

Etienne
[Quoted text hidden]

Saku Ytti <saku@ytti.fi>   Fri, Dec 2, 2022 at 9:57 AM
To: Etienne-Victor Depasquale <edepa@ieee.org>

Hey,

> On Wed, 30 Nov 2022 at 12:21, Etienne-Victor Depasquale <edepa@ieee.org> wrote:

> I do not intend in the slightest to dismiss the validity of the concerns you raise,
> but only to suggest counterpoints to these concerns.

I accept critique on the validity of my concerns. But I also think there is a body of work
showing that people usually have poor understanding of what they are doing. We have high
quality data and peer reviewed papers showing that in finance everyone is losing money
compared to the market. In year1 >50% and it quickly goes to 99.999..% as years are added.
Professionals who are paid millions underperform the market, ~always, and their customers

would be better off buying SP500 and holding. Yet this industry thrives and serious people write articles about what to buy and what to sell.
I think Kahneman and Tversky made some compelling points (unsure if reproducible). I recall one example where people wanted to understand how radiologists think, how do they know when an image contains cancer and when it does not. There was no intention to improve diagnostics, just to understand what is happening in the decision making. As a starting point, they developed a trivial algorithm or criteria on how to classify imagining as no/yes cancer and benchmarked it against professionals to understand how bad exactly their starting point is. What they found out was that the people who had no expertise in radiology, no medical training, and no intention to gain that knowledge built a naive model which outperformed professional radiologists. They found out the radiologists given the same image on the same day would confidently come to different diagnoses on it.

Networking world is mostly run by uneducated people, like myself, because it's such a new industry it didn't attract top talent when it was born, as top talent wanted to go to established industries with stability and a good compensation package.
So if we can show that top talent is already rather poor, and we expect networking people to be worse, I can't see how we should put a lot of weight on the input from these people, including myself. And should look for other avenues.

> The data is obtained from people who state their position.
> I don't show it in the Jupyter notebooks, but the positions are shown
> in the Google Analytics page I had shared with you and
> their decision-taking status is shown there too.
> I would dare claim that the respondents meet your criteria, with very few exceptions.

I didn't mean to imply they should be high-level, quite contrary, I think the people actually installing the devices probably have the best idea what technologies the company is mostly using and what technologies are not. The people who answered probably don't know what GPON and active ethernet differences are, and which they are using, but confidently answered something. So it is probably possible to somehow get an answer on what companies are doing, by asking the people who are actually doing it. But any forward looking 'where are you going' I can't see any way being remotely actionable, maybe some small companies where decision-makers are also subject matter experts and perform work forward looking statements have value, but in any big company it's likely complete trash.

> (e.g., which access technologies do you use to serve subscribers),

Person has to know what technologies exist and what they use. It is not at all given they do. Just last week I had to argue with a principal engineer whether or not IPv6 needs MLD to work. This principal engineer could have reviewed any router configuration and see we don't allow MLD to enter the control-plane, while we offer IPv6 which works and passes traffic, and they could have concluded that we don't need MLD. But the only thing they did, for the first time in their life, reviewed RFC for a couple minutes, decided that IPv6 needs MLD and won't work without, with complete confidence.
When I joined AS2914 I was on EBC with vendor the 2nd week of my job, and during discussion with vendor I happened to mention we don't do IP lookups in core, both my director and VP present in the same meeting corrected me to the vendor that we actually do IP lookups in core, and only MPLS switch pseudowires. Considering I had 2 weeks tenure, I didn't argue, because obviously I must have misunderstood something. During coffee break I logged into the network to review, to understand why I am so confused. But all I found was, yes, we do label everything, I showed the CLI output to my director and VP and happily they understood enough to realise they were wrong. These are people with +2 decades working in that company in leadership position, who didn't understand how we forward packets in the network. But had enough confidence to correct someone who does understand.
These are individual anecdotes, but I have thousands of such, from C title down, people really have extremely poor understanding of even the most basic things, but that doesn't affect their confidence in talking about those things.

> this study is not meant to be a timeless statement.
> It is meant to show the status quo at a point in time,

And I'm skeptical if that is possible. I don't expect people to know what they are doing.
> 88.8% of my respondents are network architects and network engineers ... what do you think of that?

That in any big company, the only thing they do is powerpoint and teleconf, and if they ever did work with networks they were promoted because their manager wanted them out of the team due to being ineffective.

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It is widely known in companies like facebook, amazon, google, netflix etc, that large amount
of the experts do 0 work, and once they get hired, they start interviewing for the next gig,
because these companies prefer to hire people with experience in large silicon valley company,
so they just rototate the companies, gaining seniority and compensation package, without ever
actually performing work, as that might cause reputation risk.

I do apologise for being so negative. And I do wish I could read something contrary.

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 ++ytti
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Etienne-Victor Depasquale <edepa@ieee.org>   Sat, Dec 3, 2022 at 7:28 PM
To: Saku Ytti <saku@ytti.fi>

Saku, thank you very, very much.

> `I do apologise for being so negative.`
Contrarian views are helpful: they help to maintain a sense of scepticism.
When taking a decision, scepticism and dogmatism have to contrive to concur somewhere.
Your scepticism is helpful in forming my mental framework.

One last thing: may I quote our correspondence, or would you like me to leave out something or avoid doing so
entirely?

Warm regards,

Etienne

[Quoted text hidden]
[Quoted text hidden]

Etienne-Victor Depasquale <edepa@ieee.org>   Sat, Dec 3, 2022 at 8:15 PM
To: Saku Ytti <saku@ytti.fi>

Well the following is the last thing, after all :) ....

Basing on Mark's feedback and what I have learnt from you,
I am going to ask SGA to help me set up two-three interviews (to understand current and future implementations of
metro-area networks).

Whilst I note that you are sceptical about the establishment of truth using limited numbers of points of reference,
I do on the other hand note that you tend to favour the opinion of people who are directly involved in operations.

Therefore, the question is: what kind of organizational role would you favour in interviewees sought out to help
establish the truth?
Roughly the scope of the interview will be the survey questions, but I am going to attempt to elicit a more articulate
response through discussion.

Warm regards,

Etienne

[Quoted text hidden]

Etienne-Victor Depasquale <edepa@ieee.org>   Tue, Dec 6, 2022 at 8:36 AM
To: Saku Ytti <saku@ytti.fi>

Bear with me ... I'm being chased by SGA's people who would like to hear from me.

Would you put up with this gentle reminder to address the points I raised in the two emails before this one?

Thank you for your gentle patience.

Warm regards,

Etienne

[Quoted text hidden]

Saku Ytti <saku@ytti.fi>   Tue, Dec 6, 2022 at 10:23 AM
To: Etienne-Victor Depasquale <edepa@ieee.org>

On Sat, 3 Dec 2022 at 21:15, Etienne-Victor Depasquale <edepa@ieee.org> wrote:

> Therefore, the question is: what kind of organizational role would you favour in interviewees sought out to help establish the truth?

Personally, I would try to ask the people who actually do the work,
they probably have the best idea what technologies they are deploying
and what phasing out. But this only works for current and historic,
for forward-looking I have no idea. And I don't think readers of your
paper would generally agree, I think they would prefer answers from
leadership.
I had this very same problem trying to understand Cisco 8000
(Leaba/Spitfire/Pacific) better outside technical material from vendor
and lab testing, as for some reason unlike previous next-gen hardware
from vendors, I see almost 0 engagement in various forums. I know that
Telia runs them and MSFT. But people I know in Telia are now in more
senior positions and don't understand the platform or know about their
challenges at all, and I don't have access to anyone actually working
with the boxes and having a good perspective on liabilities and
assets. MSFT started their Cisco8k deployment in Finland (I suspect
because small market, so less bad press if any trouble, prudent
strategy), they blackholed all Azure BOYIP traffic for two _weeks_,
but only if you had direct connection to them in Finland (so only
three incumbents were affected), everyone else took their transit out
of Finland at met Azure in other platform and had no trouble. I'm not
surprised or I don't think this is atypically poor performance, but is
recent anecdotes about how I see the world, I'm sure MSFT is staffed
with dozens of brilliant network engineers, but for some reason no one
feels enabled or responsible so even acute blackholing problem like
this, can't be addressed in timely manner.
If you ask MSFT or Telia leadership about Cisco 8k, they will use
attribute substitution and answer question 'do you like the people you
are engaged with in cisco' or 'is it beneficial for your career to say
positive things about this project', not with malice, but because
that's how people work when they don't have context, they change the
question and don't notice it.
I have no idea how to procure actionable information from people, and
it would be interesting exercise to look at self-identified key
data-driven processes companies have and then independently analyse
the data quality, I suspect in most cases the data is abysmal and only
thing the process does is improve comfort level in organisation, not
probability of success.

> One last thing: may I quote our correspondence, or would you like me to leave out something or avoid doing so entirely?

I suspect attribution would not affect you positively, I have no
authority over anything. So I would suggest that if you do quote, do
not attribute.

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  ++ytti