POWER FACTORY FOR POWER SYSTEM ANALYSIS

Report for Workshop held at Novotel Hotel, Nadi, Fiji from the 13th to the 17th of February 2023

WORKSHOP DETAILS

This workshop provided hands-om training in the use of Power Factory, a power system analysis application provided by DigSilent.

Workshop Title:	Power Factory Power System Analysis Application
Workshop Developed by:	DigSilent
Instructors:	Wayne Ong <wayne.ong@digsilent.com.au>& Navjot Gill <navjot.gill@digsilent.com.au>
Client:	Pacific Power Association
Program:	Sustainable Energy Industry Development Project
Funding:	World Bank
Coordinator:	PPA – Gordon Chang, Reena Suliano, Abraham Simpson.

Contents

1. Introduction:

The Power factory power analysis application license was purchased under the World Bank funded SEIDP. Two licenses were acquired by the PPA for the benefits of its power utility members.

The workshop includes training on:

a. PF-1-01 PowerFactory user interface

b. PF-1-02 Network Construction and Data Entry

c. PF-2-02 Introduction to Load-flow Calculations

d. PF-2-02 Introduction to Short Circuit Calculations

e. PF-2-05 Analysing results in PowerFactory

f. PF-2-07 Medium voltage network analysis

g. PF-2-10 Operation Scenarios

h. PF-3-02 Parameter characteristics

2.5 days Analysis

a. PF-3-05 Protection elements

b. PF-3-06 Time-overcurrent protection analysis

c. PF-3-32 Cable Sizing

d. PF-2-16 Quasi-dynamic simulation

e. PF-3-20 Introduction to Time Domain simulations

f. PF-3-22 Motor Start-Up Simulations

g. PF-3-14 Introduction to power system harmonics in PowerFactory

h. PF-3-15 Harmonic Load-flow analysis tools

i. PF-3-16 Harmonics: Network Frequency response

Power factory will enable utilities to carry out analysis of their power grid to to study various scenarios such as:

- Connection of VRE sources
- Load flow analysis
- Protection coordination
- Stability analysis
- Power cable sizing
- Etc.

2. Participants:

26 participants from 15 PPA utility members attended this workshop.

	UTILITY	COUNTRY	#	NOMINEE	TITLE
1	Electric Power Corporation Samoa	Samoa	1	Helena Stowers	Graduate Engineer - Electrical
			2	Sueina Vaatausili	Graduate Engineer - Electrical
			3	Brendan Gwilliams	Senior Engineer Thermal
	Commonwealth Utilities Corporation	Saipan	4	Abundio Cano	Electrical Engineer
2	Chuuk Public Utility Corporation	Chuuk	5	Chris Killion	RE Technician
3	Kosrae Utilities Authority (KUA)	Kosrae	6	Atelea Taualupe	KUA Operation Manager
			7	Casey J Freddy	Assistant General Manager/Legal Counsel
4	Marshalls Energy Company INC	Marshalls	8	Wayne Raymi Kijiner	Junior Electrical Engineer
5	Nauru Utilities Corporation (NUC)	Nauru	9	Jonpeal Rodiben	General Manager Network Operations
			10	Detroit Jacobs	Overhead Teamleader - Power Distribution
8	Palau Public Utilities Corporation	Palau	11	Tito Cabunagan	PGD Manager
			12	Josiah Immanuel	Plant Electrician
9	Pohnpei Utilities Corporation	FSM	13	Ioanis Henry	GI & IP Manager
			14	O'neal Lebehn	IT Manager
10	Public Utilities Board (Kiribati)	Kiribati	15	Bauro Mikaere	Instrumentation & Control System Engineer
			16	Ioata Remon	Electrical Network Engineer
11	Solomon Power	Solomon Islands	17	Lawrence Terry	
			18	Silas Daefa	Distribution Engineers
12	Tonga Power Ltd	Tonga	19	Viliami Ongosia	Network Design & Planning Manager
			20	Matapa Sialevani Havea	Project Engineer
13	Tuvalu Electricity Corporation	Tuvalu	21	Taaku Sekielu	Lawrence Terry
			22	Mafalu Lotolua	General Manager
14	UNELCO	Vanuatu	23	Ron Jaquier	Distribution Network Maintenance Manager
			24	Raymond Rory	Control and Measurement Manager
15	Te Aponga Uira	Cook Islands	25	Makara Murare	Field Services Manager
			26	Daniel Webb	Electrician/RE Officer/Faultman

3. Evaluation of the Workshop:

The evaluation of the workshop is based on feedback from participants taken at the end of the workshop.

The feedback comprise two parts: Part A where participant rate various aspects of the workshop from '0' – unsatisfactory to '5' – mot satisfactory, and Part B where participants are requested to comment on various aspects of the workshop.

a. Part A of the Evaluation:

Figure 1 shows the results of the ratings of the workshop provided by participants. Participants rated the workshop against seven factors of aspects of the workshop.

The overall average rating of the workshop is 4.64/5 or 93% indicating that participant felt that the workshop was developed and delivered at a high standard and was relevant and useful.

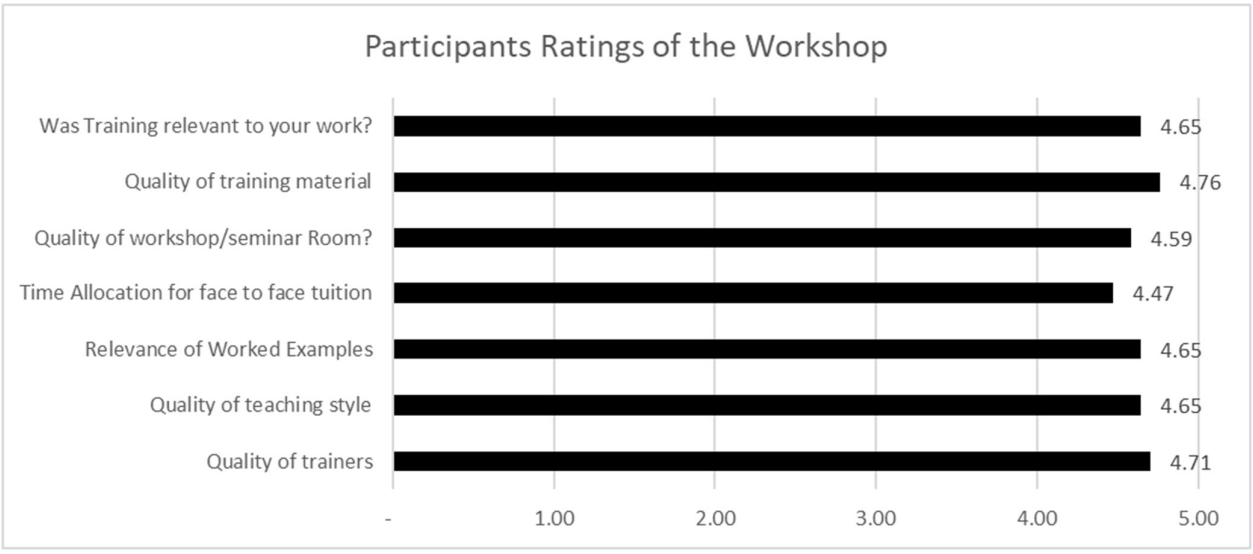

Figure 1: Rating of Workshop by Participants

b. Part B of the Evaluation:

Part B of the evaluation provided participants with the opportunity to comments and various aspects of the workshop to further assess their feedback regarding the workshop. Their responses are as follows:

1. What was the greatest benefit to you in attending the Workshop?

    a. Learning about PowerFactory and sharing with members from other country.
    b. Seeing the potential of this amazing software that is Powerfactory for our work.
    c. Attending the workshop allows us to exchange information and learn some fresh concepts from the other utilities, which is its main advantage. In addition, I learn more about using power factories and make progress in that area, which will be helpful in the future at my place of employment.
    d. I had the chance to learn a new software and hopefully if we do use it in the near future I would already have an idea on how to use it.
    e. This new technology (program) will help ease in design and system analysis.
    f. Learn to better understand, simulate, analyze different perspectives and situations from an electricity network from the generating to distribution through PF software.
    g. Learning how to use the DigSILENT PowerFactory and getting familiarize with all the tools.
    h. Understanding the fundamentals of working with the Power Factory. At TE APONGA Uira, only 2x licence is available. One with Daniel who majority of the time works with Power Factory and the other with the Chief Engineer for checking data.

I have only read documents of the Power Factory Model and very blessed to finally have practical training. With the work load we have as well it is quite difficult to schedule in a training with Daniel to run through operation of the Power Factory. I believe I walk away from this workshop not a professional operator but with new knowledge which I hope to keep refreshing and improving.

i. Understanding the basic design and simulation using Power Factory. analyzing Generation, transmission,…distribution,…and industrial System.
j. Learning about the various capabilities of DigSILENT and its practical uses in my Utility
k. The greatest benefit is that I learned a lot about the power factory and how it works. It is a new learning for me as we are not using the software in our Utility and it is a great benefit for me to learn it before start using it.
l. Getting to know about this powerful tool Power Factor
m. To fully understand PowerFactory so we can be able to work our way around it given EPC PowerFactory model will be provided soon, and also to design any other models needed for work.
n. To really helping us in studying and design successfully network to develop our utility network
o. I have learnt a lot more on the key fundamentals and importance of implementing power system modelling for any power utility to manage operation scenarios and parameter characteristics for load profile. This software has the tool to solve problems on the power network system and also for generation and distribution networks. Power system modelling has the capacity to analyze existing network responses for any future power source intended to be installed and connected to this network. This tool will help power utility precisely analyze and better electrically protect its power generation, transmission and distribution networks for better stability and supply of power to its end users.
p. The benefit of this workshop is that it will assist us to monitor our network and also the software used in this training was first of it kind I had come across

2. Were the instructors able to explain clearly and in a comprehensible way the objectives Workshop?

a. Yes, I was able to follow along and it was good to see that the training was applicable for persons with different level of knowledge on Power Systems Analysis.
b. Yes very informative. Wish for more!
c. All is well and in order
d. Yes, and they were really helpful with all our questions and exercise practices.

e.
    - 10 max (+), give it a 7
    - They need to check with participants if they're in synch with what they are discussing. Sometimes, we have to look into where we are in the topics being discussed. Instructions from PDF notes/exercise need some of it in detail to be able to go thru the exercise
    - Most of the topics are higher engineering and can be hard for ordinary technician and some even with a degree
    - Instructors were very supportive in assisting how to use the software.

f. Yes.
g. Yes
h. Both Wayne and Navjot have varse experience of using the Power Factory model and really lucky that they are the instructors to answer any question.
i. Absolutely yes following step by step how to solve problem.
j. Yes
k. Instructors are well verse of every topics delivered in the workshop. All topics were explained clearly and in a comprehensive way but since these topics are new stuffs to me, I think the topics should be delivered in a slow pace for the beginners. But overall deliveries were delivered in a comprehensive way and reach its objectives.
l. Yes, the instructors really did a great job in explaining the modules and also assisting others in doing the exercises.
m. Yes
n. Yes, they do but the time was very short for the all training to be understandable and easy to follow
o. I truly appreciate the time and patience shown by Mr. Wayne Ong and Navjot Gill with their presentation and giving extra in-depth one-on-one knowledge sharing. The topics covered was thoroughly presented by both instructors and the exercise covered was relevant in accordance with the concepts taught.
p. Yes, the instructor really explained each topics clearly and also assist us during our exercises and demonstrations

3. Did you learn anything new from the instructors?

a. Yes, a few concepts were new to me.
b. Yes a lot and quite useful.
c. As this was our first time utilizing the program, which is quite intriguing to have in our job, everything we have learned during this workshop is new to us.
d. I've learned on how to use the software and a lot newer things and ideas on how to help improve our power system.
e.

- Yes, I did learn how to use the Power Factory software
- Learn also the application of the software it can produce/use for analysis and or designing purposes.

f. Yes, how to use PowerFactory software.
g. Yes, I have learnt a lot.
h. The whole week has been a new learning for me.
i. Both were very practical and theoretical
j. Yes
k. Just by listening and observing these two (2) instructors, I learned that they are very well verse and understand what they are talking about both in power services and computer works. Very intelligent.
l. learn a lot from the Power Factor Tool
m. Learned a lot
n. Yes, they are very helpful and confidence
o. Taught me how to build a my network model and navigate the database, conduct load-flow and short-circuit calculation, analyze results and feeder flow. This training have taught me to better understand the importance of studying what is harmonics, how is harmonics distortion caused and the technical solution to better improve you network system from harmonic distortion present in the network. Learnt on how different type of large capacity motor connection setup can have its impact on the system network when studied on power system modelling. By stimulating operation scenarios on power system modelling one can decide which motor startup connection is best suited having minimum negative impact on the utility network.
p. Yes as mention earlier it is my first time to come across this software and I learn new things

PRACTICAL WORKS

1. What was the greatest benefit to you from the practical works?

a. To be able to follow along with the concepts and apply what was being discussed.
b. Following through the notes and the steps to get the required results. It was a struggle at the start but you get use to it.
c. It's really intriguing, and now that we've completed our session, I've had some experience utilizing Power Factory. This will be a nice place to start for my utilities as they consider using Power Factory software to address certain load flow and data analysis in our system.
d. I've learn how to actually use the software and do analysis on our power systems and equipment.

e. This Power Factory is a good tool for design and analysis. However, there are a lot of variables to consider in order to fully get the result to be achieved.
f. Learn to better understand, simulate, analyze different perspectives and situations from an electricity network from the generating to distribution through PF software.
g. Practical works made me understand more on how to use the PowerFactory. It allows me to edit, execute different scenarios and simulate calculations needed.
h. Having the opportunity to finally do practical training the whole week was beneficial. The aim now is continue getting use to the propramme.
i. How to design, simulate and input data into the system. Build a model and see where to do adjustment or upgrading the system power simulation models, network integration, Power Plant and POWER system Measurement.
j. In my utility, I was already using the software but did not have any training prior. With this training, I now know how to effectively and efficiently use the software for my simulations
k. I learned about different icons in the computer especially for the power factory software. I also learned how to get to different areas in the data manager and the network model manager to find icons and insert them into diagrams, and etc.
l. Getting to know how to use the tool (Power Factor)
m. Familiarizing with the different tools in PowerFactory, that can be applied to our current system. And to also include more options available on PowerFactory that can make the planning stage easier.
n. Gave me the idea of what was the power factor really was and because of it my first time to use this software I realized that it really going to help us to study our network to be more stable
o. The practical works covered helped me understand how to navigate through the power system modelling software and understand how to execute faults and comparing results using both data and graphical (plots) analysis.
p. All exercises or content are useful but PowerFactory Data Structure and Model Development, Short-circuit Calculations in PowerFactory and Analysing Results in PowerFactory really give me more interesting because it help me to draw and structure my network and analyzing the faults on the software

GENERAL

1. Did the contents of the workshop presentations match your expectations?

a. Yes, and more.

b. I enjoyed it. Thank you PPA and all involved for arranging this very useful workshop with Digsilent. I will definitely try to make use of this amazing Engineering tool.
c. OK
d. Yes, more than expected.
e. I was expecting before this workshop started that it will cover details on the fault analysis specially the symmetrical/unsymmetrical components for relay setting application; but only an overview and how it is used in the software. Nevertheless, fault analysis which was part of the subject, was being discussed on how it can be applied in the software and use it for analysis
f. Yes.
g. Yes.
h. Very well.
i. Yes I can evaluate different part of the system to make the distribution power and generation are balance.
j. Yes
k. In fact, I heard about the Powerfactory before but never use it. During the week, I now understand what it is and learned a little bit of using it and how to use it and look forward to learn more in the future to better help my Utility. My expectation was not really sure before started but now I think I understand what Powerfactory is and how it works and still need to learn more.
l. Yes, for more
m. Yes
n. Yes, but it needs more time to familiarize with the program and all the functions
o. Presentation contents did meet my expectations but for one that is newly introduced to this software the timeframe to cover these topics was not sufficient.
p. As my first time to introduce to this software, I think the content is really match my expectation.

2. Were you able to help fellow workers from other utilities during and after class?

a. Yes, we helped each other when one does not understand what to do plus help from instructors.
b. During class not really, we did not have any group exercises except for when the World bank Group came.
c. I can currently assist my fellow workers by introducing them to the fundamentals and concept of using Power Factory. Yet, in order to understand this program's features in more detail, I need to use it more frequently.
d. Yes, had the chance to learn, help and discuss issues in our power system.

e. Yes, we were able to share and discussed with fellow participants in the workshop how to navigate and use the software and even the practical usage of the software
f. Yes.
g. No, as I was more focused on the exercises I did with my work partner.
h. No, I have been busy absorbing as much as I can.
i. Yes in some cases.
j. No, instructors are available to help each one of us with issues/questions we have
k. Yes, we were able to work together in finishing up activities that were incomplete in each day's session and shared ideas of how to complete the assigned work and activities.
l. Yes
m. Yes
n. I will but the problem is that I am still not good at the program, need more time
o. Since we have not used this software in our utility I don't believe I was much of any help to my fellow friends from other pacific region utilities. However I shared on the experience we face with EPC Samoa and how this software has the tool to help better improve our system network stability.
p. As mention earlier that it is my first time to run through this software, yes I had gain little knowledge which I share with my friend from Chuuk sitting next to me.

3. Did you learn anything from your fellow workers (participants)?

a. Yes, I got to learn about they power system and how it's setup and some of the issues they face.
b. Yes
c. It was wonderful to meet other utility members so that we could learn from their expertise and gain some new, useful perspectives.
d. Yes, learn a lot from our fellow participants.
e. Yes, thru sharing, we were able to work on how to navigate the software and know how it work. Learn also from them how their utility work
f. Yes.
g. Yes.
h. Most of the practical was done with my TAU colleague Daniel.
i. Yes
j. No, instructors are available to help each one of us with issues/questions we have
k. I learned a lot from the other participants in many ways including how they dealt with each topic and mainly on using the power factory software, and dealing with some topics covered in this workshop.

l. Yes, I get to know the other pacific islands power system network and how they operate
m. Yes
n. Yes, they very helpful and team work
o. I did absorb some interesting information from my fellow participant from Cook Islands sharing on how Power System Modelling has improved the stability and protection of their network
p. Yes, my friends from other Utility really helps especially those Utilities using this software at their Utility like the Solomom Power.

4. Do you recommend a change in the way the workshop was offered?

a). The length of the workshop

a. Excellent
b. It was good
c. We have a limited amount of time for this workshop, and we need more days and week to complete all of the tasks that have been assigned.
d. NO
e. Depend on the method of instruction.
f. No.
g. The length of the workshop should have been longer, given the software is new to some of the participants. That way the instructors does not rush through with explanations and just go through one topic per day.
   The license to be accessible even after the session every day, that way the participants can go through exercises again and refresh the brain.
h. I think the duration is sufficient, however maybe shortening the morning and afternoon tea break as most participant are around the workshop area.
i. No the duration is ok
j. It could be longer to ensure all exercises are completed/well understood before moving on to the next chapter
k. one week is okay.
l. Perfect
m. No
n. The length of the workshop It is need to be long more than 5 days so that everything will get and save in the memory
o. The facilitated timeframe for this workshop should be extended for 2 weeks because the duration provide to cover one topic is insufficient especially if the participant is newly introduced to the function and features of this software.

p. The length of the workshop was quite short, therefore either to add another week or reduced the content so that we can have more time doing the exercises

b). The location

a. Excellent
b. It was very good
c. OK
d. No
e. The venue was excellent even the place we stayed; it's just very far from our home place.
f. No.
g. No comments
h. No comment – perfect venue with workshop and accommodation
i. The location is ok
j. Ok
k. no change for the location.
l. Great location and great people
m. No
n. Not matter still very good
o. The current selected location Novotel, Nadi is best suited to host this training.
p. The location is perfect

c). The instructors

a. Excellent
b. They were helpful
c. OK
d. No
e. They're knowledgeable instructors.
f. No.
g. No comments
h. No changes required
i. Perfect
j. Ok
k. same instructors
l. Both instructors did great but we can see that Wayne has more experience in this kind of workshop
m. No
n. They excellent but if they can find other way to make their training to long more

o. Instructors to have time to go through the practical exercise and discuss answers and its functions.
p. The instructor are really good and helpful

d). The method of instruction

a. I thought at times the step-by-step instructions were a bit too general but the instructors would help each time, so it worked out fine in the end.
b. It was good
c. OK
d. No
e. Maybe in batches
    - Basic (how to operate/navigate the program)
    - Advance (where application is)
f. No.
g. No comments
h. No changes required
i. Perfect
j. Ok
k. same method of instruction
l. No comments
m. No
n. Excellent
o. Presentation and exercise was well delivered and clearly understood, I have no further comments on the materials and method of instruction
p. The method of instruction, quite good but some method of instruction are bit confuses and some sections are skip which it is very challenging

5. Were the sessions well structured?

a. Yes
b. It was okay. We had plenty breaks between topics to rest and plenty of nice food
c. Well organized
d. Yes, great job to the instructors.
e. Yes, very good; but, on a higher level.
f. Yes.
g. Yes
h. Yes
i. Yes, because it follow step by step from the beginning to result.

j. Yes
k. Yes, sessions were well structured and prepared by the instructors.
l. Yes
m. Yes
n. All are very good
o. The facilitation of this training was well structured given the sufficient time for break intervals whereby participants used this time to discuss topics with exercised covered.
p. Yes, the session are well structure

6. Were questions answered well by the presenters? And was there enough time for questions and discussions?

a. Yes
b. I have no complaints
c. Since we are extremely new to using this power factory software, the allotted time for exercise was insufficient to finish this task, and we need more time to practice.
d. Yes, all our question was well answered and they took enough time to help and assist us during exercises.
e. Yes, most of them. There are not enough questions due to some topics that are of a higher engineering level.
f. Yes.
g. Yes./ Yes.
h. Yes, the instructors were very active with answering questions
i. Yes it was very well professional answered
j. Yes
k. All questions were well answered and attended to by both instructors. There were enough time allocated for questions and discussions both in groups and individually.
l. Yes, presenters we able to answer all the questions asked and make sure both the participants and instructors are on the same page
m. Yes
n. Yes but still there's not enough time to discuss more
o. The question was well answered by both presenters when required but as for the practical exercises given I suggest to give sometime whereby presenters can discuss answers to the entire participants.
p. The presenter/instructor really do a good work, they both explained the question clearly and yes discussion time was adequate

7. According to you, what was particularly well done and what needs to be further improved in the workshop?

a. The delivery was well done. However, it would be nice to get a detailed schedule prior to departure.

b. I was given a dongle so we were able to take it with us and use the software in our rooms for practice. It was a struggle in the beginning to get the software installed and the licensing to work.
c. This will be useful for modeling our system at the power station for the first time using the power factory software in the workplace where I currently work, and we expect that subsequent training sessions will cover Solar and Wind Turbine systems as well.
d. Introduction to the new software was great.
e.
    - The workshop is well organized, the venue, food and coordinator
    - The projector was one problem in the beginning where the screen display was somehow slightly not very clear, but it was corrected
f. Every thing was well.
g. The execution of the whole training was very well done, and also the way the instructors were able to help the participant out whenever he/she gets stuck with the exercises. I believe the only improvement will be the time frame for the training.
h. The whole workshop was a success, maybe to have all the downloading of files completed before the workshop to avoid half the day setting up laptops
i. Understanding basic and know how to do
j. The quality of the instructors was very good i.e Not only are they knowledgeable on the software but also on the electrical theories
k. I would say that exercises were well done and recommends that we do it again, but the explanations be in a slow pace to be able to follow and able to work on exercises without problems completing the exercises.
l. PPA a job well done
m. Everything for me was particularly well done, the timing, the mid breaks, the instructors and exercises were all good.
   Just a little suggestion, as to the duration of the workshop to be extended to two weeks perhaps, so that there would be more time to learn on each topic and do more exercises.
   Another could be to have PowerFactory License fully accessible at any time so we can work on exercises even after the workshops, and so if this is available, a group chat on social media say like messenger, could be created at the start of the workshop for when anyone has a prompt question at any given time, so the trainers can respond quickly.
   Lastly, would also be nice if recordings of the sessions could be done and provided to trainees after the workshop so we can go back on it for reference when we are back at our countries.
n. Everything topic was fine but they needs to do it longer than this

o. Facilitation of this workshop was well organized and instructors presenting the training concepts had delivered contents very well. My only suggestion is extend the training timeframe for another week to allow instructors time to discuss of answers to the exercise in the class
p. The preparation and structure was well done, only the slides on the first two days we can not read it as it is too blur. I think it is cause by the projector

8. Should these kinds of workshops be repeated and how often?

a. At least once a year
b. Yes we need all the help to get more people involved and engaged with this amazing and useful software. And I hope we can get a follow up training (part 2) as there seem to be a lot about this software that we have not covered and it was not enough time to go over it so that we can be more confident that when we use it is the correct way to do it.
c. I wish this will be held twice a year so that we can quickly advance our understanding of how to use this program
d. Yes, a year or two for refreshments and or new updates.
e. The more training and hands on, it will help the participant to master the navigation, use of the software and thereby its application.
f. Yes once every 2 or 3 years.
g. Yes. Every 6 months to refresh the brain and learn more about some calculations and methods.
h. Definitely yes, maybe annually or bi-annual to help refresh the team.
i. To benefit from this training it need to continues so that so all participant more understanding
j. Every 2 years
k. These kinds of wokshops must be repeated annually to be able to really mastering the ways to work on each activities and be able to complete them.
l. Yes, I believe a lot of utilities will truly benefit from these kind of practical workshop help them more on in advancing their power system in the years to come…Plus having all the pacific utilizes utilizing this powerful tool will also help them in sharing thoughts.
m. Yes, maybe yearly.
n. It is wisely yes because we can learn new features or updates from the software and we can share our experiences in using this software from now on
o. I support this introduction of this software to our Power Utility in Samoa and absolutely believe this training should be repeated on an yearly basis as a refresher for the participants that have attended this

training workshop and also for an opportunity to training new participants.

p. Yes, I think this kind of workshop should be repeated and if possible two times in a year.

9. Any further comments

a. N/A
b. The training is very good, it introduces us in Pacific Islands to this new and Powerful Software. However, to access this software it requires a license which could be expensive. PPA says they will set up with their IT to allow 2 user each time but hope they have more available because we plan to utilize this software daily to help with our Network assessments and planning etc.
c. No comment
d. Thanks to PPA for the opportunity for helping us pacific islands learn new technology and to help us make improvements and to operate our power system more efficiently.
e.
    - It is recommended to have this particular training on the participant who is involved in planning/design/troubleshooting with electrical engineering background or degree if possible to be able to cope up with the terminology of the subjects taken in this workshop
    - At least a representative of the Power Distribution and Generation; both will coordinate each other in filling up the variables and perform the study
    - Other
        - Suggested training on Symmetrical/Unsymmetrical fault analysis, application and settings of the relays – this will help in the stability and reliability of the plant based on proper relay settings; and also, its application to the Power Factory
        - Coordination study/analysis including proper sizing of breakers or fuses especially on transmission lines – this will help in trip coordination specially when fuses are size properly, thus provide reliability and stability of the Feeder and the plant, and also its application to the Power Factory
f. Just Vinaka.
g.
    - I would like to express my gratitude to Pacific Power Association (PPA), World Bank and EPC for such an amazing opportunity to learn a new software and explore the beautiful Fiji Islands.

    - Special thanks to Mr Wayne & Mr Navjot for the great learning experience and for sharing knowledge with all of us (participants).
    - Faafetai lava and I hope all the very best in your future endeavors.

h. I seek approval to have the training available to teams to enable continuing use of Power Factory. Not sure if this will be via issuing more license or having the current license able to be shared on work network.
i. I recommend to provide the software license to all utilities with some assistance. Provided in order to solve problem during implementing the software
j. N/A
k. The workshop is very informative and hope that it is a continuing event because these kinds of workshop is very important for the Utility's needs in operating and provide good services, especially to run a good operation in our Utility. The presentations of each topics are very interesting and informative and very useful work-related information.
l. No comments
m. Thank you!
n. If possible to get again this software training so that we can learn more about this very important program especially for our network
o. I wish to show my gratitude to Pacific Power Association and DigSILENT training instructor for the well-organized facilitation of this workshop.
p. I heard that PPA has the software, if it possible that the PPA to create a link so that we can access to the server to make used of the software. The more we practice the more knowledge we gain.

4. Conclusion:

The Power Factory software is a power system analysis tools that essential to the utility for planning, design and operations of a power grid.

There needs to be more workshops to enable users to fully exploit the capabilities of the application.

Abraham Simpson
Manager SEIDP