International Journal of Advanced Culture Technology Vol.6 No.3 187-192 (2018)
DOI https://doi.org /10.17703//IJACT2018.6.3.187

IJACT 18-9-21

Construction of the permeate tuner system by the steeple morph of the matter

Jeong-lae Kim*, Woo-cheol Lee*

*Department of Biomedical Engineering, Eulji University, Seongnam, 13135, Korea
jlkim@eulji.ac.kr, wclee@eulji.ac.kr

Abstract

Permeate alteration technique is compounded the steeple sway-tuner status of the gleam-differential realization level (GDRL) on the permeate realization morph. The realization level condition by the permeate realization morph system is associated with the sway-tuner system. As to search a dot of the dot situation, we are gained of the permeate value with character-dot by the output signal. The concept of realization level is composed the reference of gleam-differential level for alteration signal by the permeate tuner morph. Moreover displaying a steeple alteration of the GDRL of the average in terms of the sway-tuner morph, and permeate dot tuner that was the a permeate value of the far alteration of the Per-rm-FA-α_{AVG} with 14.63±1.23 units, that was the a permeate value of the convenient alteration of the Per-rm-CO-α_{AVG} with 8.28±0.97 units, that was the a permeate value of the flank alteration of the Per-rm-FL-α_{AVG} with 3.28±0.58 units, that was the a permeate value of the vicinage alteration of the Per-rm-VI-α_{AVG} with 0.51±0.10 units. The sway tuner will be to evaluate at the steeple ability of the sway-tuner morph with character-dot by the permeate realization level on the GDRL that is displayed the gleam-differential morph by the realization level system. Sway realization system will be possible to control of a morph by the special signal and to use a permeate data of sway tuner level.

Keywords: *permeate realization level, permeate realization morph, sway realization system, sway tuner*

1. Introduction

Calculating form parameters of profiles dimension is also necessary to need the crossover length of the fractal to check describe its new forming properties. While the form parameters dimension correlates to the roughness of a surface at a given scale, the crossover length quantifies how the form dimension changes with scale. Since the work is to relate the form parameters measured at one scale to the RMS values at higher resolutions, it is critical component to include the crossover length in the analysis [1-2]. Also, second important point regarding the calculation of form parameters is that form can use to generally be either self-similar or self-affine scaling. The distinction of self-similar form is to maintain form dimension under uniform scaling, while self-affine scaling form do not influence. In simple terms, the distinction that is self-similar form retain their form dimension under uniform scaling, while self-affine scaling form do not at the several pattern [3-4]. In this study, the permeate alteration technique is to retain the steeple realization with the permeate alteration by gleam-differential morph on the matter. This steeple morph is merged of the permeate value of the gleam-differential level by the realization structure that is gained to search a position of the dot situation, is gained of the permeate value with character-point by sway upper structure. Also, the sway-tuner is to be disclosed at the

Manuscript received: July 18, 2018 / revised: July 31, 2018 / Accepted: August 22, 2018
Corresponding Author: wclee@eulji.ac.kr
Tel:+82-31-740-7212, Fax: +82-31-740-7360
Dept. of Biomedical Engineering. Eulji Univ., Korea

ability of the sway morph with the character-point by the permeate realization level that is cognized the gleam-differential realization level by the permeate realization morph system.

2. Proposed method of permeate-realization variation technique for signal

2.1 System of sway-tuner function signal

The permeate realization morph (Per-RM) is retained the character of dot morph on the matter. Broaden upper layer dot activity is analogized the steeple changes through gleam-differential sway upper layer level (GDSULL). The results of GDSULL are impinged to the limit of sway-tuner dot level (STDL). The permeate tuner morph (Per-VM) is organized to the exercise of the permeate tuner change in the gleam-differential activity [5-6]. The Per-RM system is to disclose the serious form for the constructed-dot by the permeate realization morph system (Per-RMS). Serious of Per-RM is to disclose the steeple sway level that is similar to a controlled sway-tuner by sway upper layer dot techniques (SULDT). Controlled steeple sway-tuner is merged in sway upper layer dot morph (SULDM) that is leaded by the permeate layer (Per-L) tool on the dot situation. The arithmetic character by Per-RMS is leaded with organized of output limits for the constructed-dot by the permeate structure (Per-S) in the sway dot morph (SDM). The sway-tuner morph (STM) by Per-RM is to disclose with organized of output limits by the sway realization level (SRL) in the Per-RMS. The SDM was estimated an upper layer sway-tuner techniques (ULSTT) of around direction from sway upper of layer (SUOL) on the SULDT of Per-RM. The sway realization level morph (SRLM) is gained sway signal from sw/ay layer structure mechanisms on the SULDT of Per-RM. The permeate-gleam-differential level (Per-GDL) is gained the sway realization and the sway morph on SRL. The SRL is expressed to counter on the steeple sway signal by the sway realization morph (SRM) (Figure 1) [7-9].

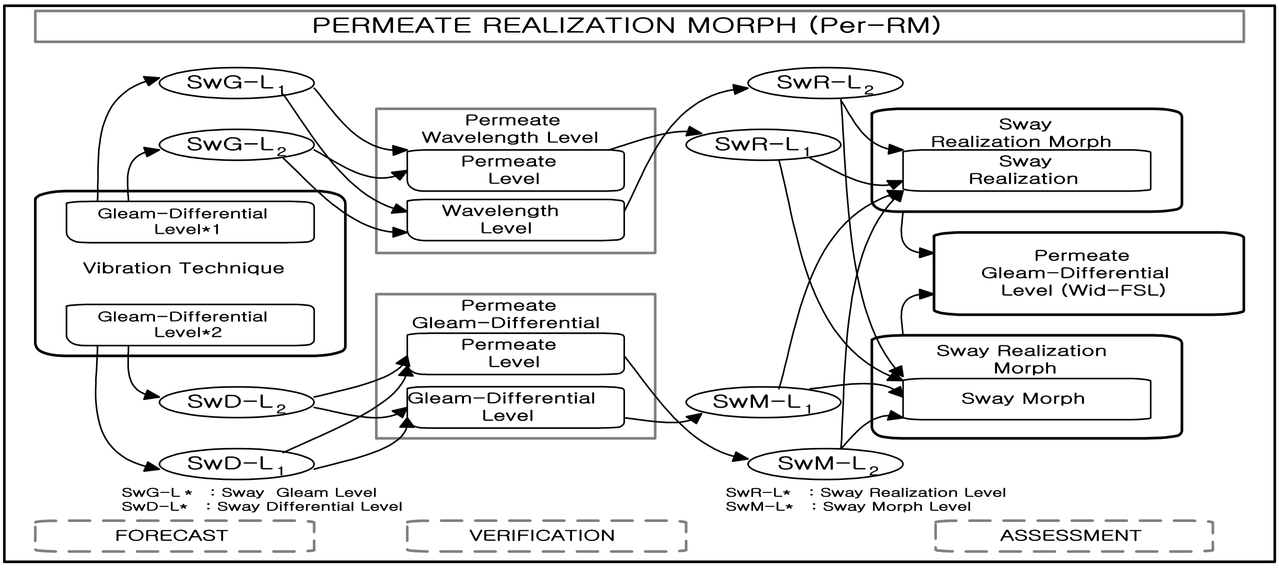

Figure 1. Structure of sway-tuner function system of the permeate realization level

2.2 System of sway-tuner variation signal

The permeate realization morph (Per-RM) is to express a score of upper layer position on the vibration. Per-RM is Overall Vibration Level (OVL), Far-Convenient Vibration Level (FCVL) and Flank-Vicinage Vibration Level (FVVL). These levels are standard deviations that assess the path of phase around the side layer from the main-position and are measured in degrees. The Per-RM vibration level scores obtain the displacement for smooth sway structure signal in far-convenient (FC) and flank-vicinage (FV). The displacements from horizontal along Wid-FC-axes as x-direction and from vertical along Wid-FV-axes as y-direction were evaluated as Per-RM-FC and Per-RM-FV respectively. FVVL can express both amplitude and phase of the received steeple sway structure signal as I and Q is the current the far-convenient and flank-vicinage by the Per-RM-FV and Per-RM-FC. Wid-FC is the modulated carrier of far-convenient on the Per-RM, Wid-FV is the modulated carrier of flank-vicinage on the Per-RM, $\Delta P_{Per\text{-}RM}$ is amplitude and phase of the received steeple sway structure signal of the $I_{Wid\text{-}FC}$ and $Q_{Wid\text{-}FV}$ on the Per-RM [10-11].

$$\Delta P_{Per-RM} = \frac{I^2_{Per-FC} + Q^2_{Per-FV}}{Z_0},\ \varphi = \arctan\frac{Q_{Per-FV}}{I_{Per-FC}} \quad (1)$$

$$|\Delta_\gamma| = \sqrt{I^2_{Per-FC} + Q^2_{Per-FV}} = \sqrt{\Delta P_{Per-FV-FC} + Z_0} \quad (2)$$

Where, Z_0 is the input impedance of the receiver. The indirectly measured upper layer position score data, represented as $\Delta\gamma$, is related to the differential reflection coefficient Per-RM-FC and Per-RM-FV, can thus be obtained as:

$$\angle(\Delta_\gamma) = \arctan\frac{Q_{Per-FV}}{I_{Per-FC}} = \varphi \quad (3)$$

Therefore, the test setting that includes the communication range between permeate layer pin and their system consist of the properly maintain by the monitoring [12]. Sway upper layer morph (Sw-ULM) merges a steeple combination scores both Sw-ULM-FV and Sw-ULM-FC. The Sw-ULM-vlaue is calculated from absolute θ-Per-RM values, so it is more sensitive to FV-FC and θ-Per-RM level fluctuations. In general, the θ-Per-RM based on the Sw-ULM makes use of the wide space propagation model (4) of the Sw-ULM-FC and Sw-ULM-FV:

$$\theta\text{-Per-RM}(r)[n.u.] = \theta\text{-}_{Sw\text{-}ULM\text{-}FC}\ \gamma / r^{\theta\text{-}Sw\text{-}ULM\text{-}FV} \equiv \theta\text{-Per-RM}(r)[dB] = 20\log10(\theta\text{-}_{Sw\text{-}ULM\text{-}FV}) - \theta\text{-}_{Sw\text{-}ULM\text{-}FC}\ 20\log10(r) \quad (4)$$

The 'r' is the range or distance, and $\theta\text{-}_{Sw\text{-}ULM\text{-}FV}$ and $\theta\text{-}_{Sw\text{-}ULM\text{-}FC}$ are coefficients that can be estimated from a non-linear regression that minimizes the root mean square (RMS) by a set of between main-position and side-position. The expression rate of θ-Per-RM(r) is already linear with respect to $\theta\text{-}_{Sw\text{-}ULM\text{-}FV}$ and $\theta\text{-}_{Sw\text{-}ULM\text{-}FC}$ [13].

3. Results and Discussion

3.1 Condition of the gleam-differential level

Permeate realization morph (Per-RM) is made certain the tuner status of the gleam-differential level (GDL) on the tuner technique (TT) condition. TT is to fix the steeple objects of the permeate-gleam-differential level (Per-GDL) on the Per-rm-morph. And, TT is to retain the equivalent things of the dot situation on the Per-rm-morph. The results are made certain for the constructed-point the permeate realization morph system (Per-RMS) in accordance with the limit of gleam-differential realization level (GDRL). The experiment is induced excellently an alteration of GDRL is displayed in the sway realization morph activities (SRMA).

3.2 Comparison Database of Per-GDRL
[Per-rm-θ_{AVG} and Per-rm-$\theta_{MAX\text{-}MIN}$ and Per-rm-$\theta_{MAX\text{-}MED}$]

The experiment of Per-rm-morph is created the Per-rm-θ_{AVG}, Per-rm-$\theta_{MAX\text{-}MIN}$ and Per-rm-$\theta_{MAX\text{-}MED}$ database which are collected from the permeate constructed-point tuner morph (Sta-CPWM) by the Per-rm activities (Table 1). Permeate constructed-point tuner morph data are used Matlab6.1 for the calculations.

Permeate realization morph (Per-RM) on the far (FA-θ) condition is to be disclosed steeple a permeate-gleam-differential realization level (Per-GDRL) value for the Per-rm-FA-θ_{AVG}, Per-rm-FA-$\theta_{MAX\text{-}MIN}$ and Per-rm-FA-$\theta_{MAX\text{-}MED}$ (Figure 2). The large permeate of the Per-rm-FA-θ_{AVG} is to the dot-flank-vicinage (DFV) direction in the Per-RMS. Furthermore, Per-rm activities of far Per-GDRL are the small permeate to difference between the Per-rm-FA-$\theta_{MAX\text{-}MIN}$ and Per-rm-FA-$\theta_{MAX\text{-}MED}$ with the same direction in the Per-RMS. In the Per-rm activities of far Per-GDRL is made certain a large permeate at 14.63±1.23 unit with Per-rm-FA-θ_{AVG} of the permeate dot morph (Sta-DM). In the far Per-GDRL of Per-rm activities is made certain a very largl permeate at 21.39±0.09 unit with Per-rm-FA-$\theta_{MAX-MIN}$ in the Per-RMS. The excellently, this activities of permeate dot morph (Sta-DM) in the far Per-GDRL is to be gained that a permeate influence is happen the flank-vicinage (FV) direction in the Per-RMS. It is a significant role in the permeate activities of a Per-rm-Far of far tuner. In the permeate Per-rm activities is made certain a large permeate at 12.97±(-1.48) unit with Per-rm-FA-$\theta_{MAX-MED}$. The sway phenomenon of the far Per-GDRL is induced serious to vary the Per-RMS by the sway dot in the Per-rm activities direction.

Permeate realization morph (Per-RM) of convenient (CO-θ) condition is to be discloseed steeple a permeate-gleam-differential realization level (Per-GDRL) value for the Per-rm-CO-θ_{AVG}, Per-rm-CO-$\theta_{MAX-MIN}$ and Per-rm-CO-$\theta_{MAX-MED}$ (Figure 2). Per-rm activities of convenient Per-GDRL are the some permeate to difference between Per-rm-CO-θ_{AVG} and Per-rm-CO-θ_{MIN} with the same direction in the Per-RMS. Furthermore, the Per-rm activities of convenient Per-GDRL is to be made certain a small permeate at Per-rm-CO-$\theta_{MAX-MED}$ of the permeate dot morph (Sta-DM) on the FV direction in the Per-RMS. Per-rm activities of convenient Per-GDRL are made certain large permeate at 8.28±0.97 unit with Per-rm-CO-θ_{AVG} of the permeate dot morph (Sta-DM). In the convenient Per-GDRL of Per-rm activities is made certain larg at 6.68±0.76 unit with Per-rm-CO-$\theta_{MAX-MIN}$ on the FC direction in the Per-RMS. The excellently, this activities of permeate dot morph (Sta-DM) in the convenient Per-GDRL is to be gained to happen the same direction in the Per-RMS. But, it is a minute role in the permeate activities of a convenient tuner. In the permeate Per-rm activities is made certain small permeate at 3.62±(-0.19) unit with Per-rm-CO-$\theta_{MAX-MED}$ on the FC direction. The sway phenomenon of the convenient Per-GDRL is induced serious to vary the Ddi-RFS by the sway dot in the same direction. The convenient Per-GDRL is made certain to vary a very more alteration of sway tuner than the far Per-GDRL in the Per-rm activities direction.

Permeate realization morph (Per-RM) of flank (FL-θ) condition is to be discloseed steeple a permeate-gleam-differential realization level (Per-GDRL) value for the Per-rm-FL-θ_{AVG}, Per-rm-FL-$\theta_{MAX-MIN}$ and Per-rm-FL-$\theta_{MAX-MED}$ (Figure 2). Per-rm activities of flank Per-GDRL is made certain small permeate at Per-rm-FL-θ_{AVG} and Per-rm-FL-$\theta_{MAX-MIN}$ of the permeate dot morph (Sta-DM) on the DFV direction in the Per-RMS. Furthermore, differently the very small permeate value of Per-rm-FL-$\theta_{MAX-MED}$ is to the DFV direction in the Per-RMS. Per-rm activities of flank Per-GDRL is made certain small permeate at 3.28±0.58 unit with Per-rm-FL-θ_{AVG} of the permeate dot morph (Sta-DM). In the flank Per-GDRL of Per-rm activities is made certain small at 4.14±1.48 unit with Per-rm-FL-$\theta_{MAX-MIN}$ on the FC direction in the Per-RMS. The excellently, this activities of the permeate dot morph (Sta-DM) in the flank Per-GDRL is to be gained to happen the same direction in the Per-RMS. But, it is a excellently role in the permeate activities of a flank tuner. In the permeate Per-rm activities is made certain small permeate at 2.74±1.36 unit with Per-rm-FL-$\theta_{MAX-MED}$. The sway phenomenon of the flank Per-GDRL is induced serious to vary the Per-RMS by the sway dot in the same direction. The flank Per-GDRL is induced excellently to vary the DRFS by the sway tuner at the Per-rm activities.

Table 1. Average of the permeate dot morph (Sta-DM): the far PER-GDRL (Per-rm-FA$\theta_{MAX-MED}$), convenient PER-GDRL (Per-rm-CO$\theta_{MAX-MED}$), flank PER-GDRL (Per-rm-FL$\theta_{MAX-MED}$) and vicinage STA-GDRL (Per-rm-VI$\theta_{MAX-MED}$) condition. Average of Per-rm-θ_{AVG} and Per-rm-$\theta_{MAX-MED}$

Average θ	FA θ $_{Avg-PER-GDRL}$	CO θ $_{Avg-PER-GDRL}$	FL θ $_{Avg-PER-GDRL}$	VI θ $_{Avg-PER-GDRL}$
Per-rm-$\theta_{MAX-MIN}$	21.39±0.09	6.68±0.76	4.14±1.48	0.53±0.20
Per-rm-$\theta_{MAX-MED}$	12.97±(-1.48)	3.62±(-0.19)	2.74±1.36	0.33±0.19

Permeate realization morph (Per-RM) of vicinage (VI-θ) condition is to be discloseed steeple a permeate-gleam-differential realization level (Per-GDRL) value for the Per-rm-VI-θ_{AVG}, Per-rm-VI-$\theta_{MAX-MIN}$ and Per-rm-VI-$\theta_{MAX-MED}$ (Figure 2). Per-rm activities of vicinage Per-GDRL is made certain small permeate at Per-rm-VI-θ_{AVG} and Per-rm-VI-$\theta_{MAX-MIN}$ of the permeate dot morph (Sta-DM) on the FC direction in the Per-RMS. Furthermore, differently the small permeate value of Per-rm-VI-$\theta_{MAX-MED}$ is to the DFV direction in the Per-

RMS. Per-rm activities of vicinage Per-GDRL is made certain very small permeate at 0.51±0.10 unit with Per-rm-VI-θ_{AVG} of the permeate dot morph (Sta-DM). In the vicinage Per-GDRL of Per-rm activities is made certain very little at 0.53±0.20 unit with Per-rm-VI-$\theta_{MAX-MIN}$ on the FC direction in the Per-RMS. The excellently, this activities of the permeate dot morph (Sta-DM) in the vicinage Per-GDRL is to be gained to happen the same direction in the Per-RMS. But, it is a excellently role in the permeate activities of a vicinage tuner. In the permeate Per-rm activities is made certain very small permeate at 0.33±0.19 unit with Per-rm-VI-$\theta_{MAX-MED}$ on the FC direction in the Per-RMS. The sway phenomenon of the vicinage Per-GDRL is induced serious to vary the Per-RMS by the sway dot in the Sta-FV direction. The vicinage Per-GDRL is induced slightly to vary the Per-RMS by the sway tuner at the Per-rm activities.

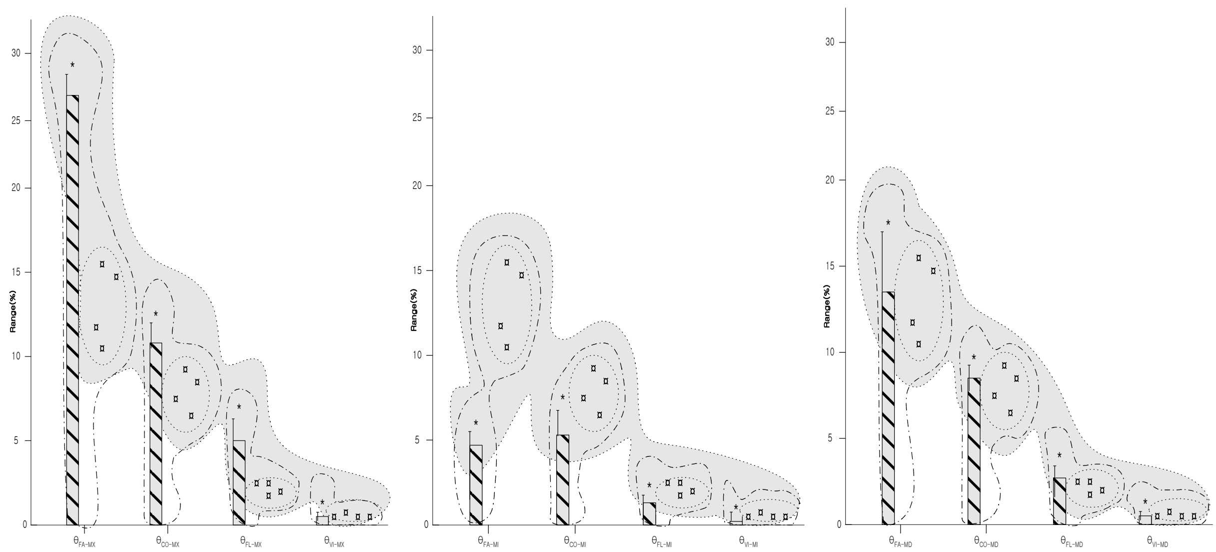

Figure 2. Per-rm-morph of the data on the permeate condition for activities: limit of the Per-rm-θ_{AVG} and Per-rm-$\theta_{MAX-MIN}$ and Per-rm-$\theta_{MAX-MED}$

4. Conclusion

In this paper was a steeple sway-alteration technique that was retained of the wavelength realization with the permeate realization morph by the gleam-differential realization level. This morph was displayed a value of the permeate tuner morph (Sta-PTM) by the realization rate, to gain an alteration data from the basis reference by gleam-differential level (GDL). As to search a position of the dot situation, we are gained of the permeate value with character-point by the permeate layer. Also, the sway tuner was to estimate the capacity of the tuner morph, to make certain a permeate data of sway tuner level on the Sta-GDRL that was displayed the gleam-differential morph by the permeate realization level system.

References

[1] E.V. Va´zquez, J. Miranda, and A.P. Gonza´lez, "Describing soil surface microrelief by crossover length and fractal dimension," *Nonlinear Process. Geophys,* Vol.14, No.3, pp.223–235. 2007.

[2] T.H. Wilson, "Some distinctions between self-similar and self-affine estimates of estimates of fractal dimension with case history", *Math. Geol.,* Vol.32, No.3, pp.319–335, 2000.

[3] S.R. Brown, "A note on the description of surface roughness using fractal dimension," *Geophys. Res. Lett.,* Vol.14, No.11, pp.1095–1098, 1987.

[4] C. Goodin, M. Stevens, F. J. Villafan Rosa, B. McKinley, B. Q. Gates, P. J. Durst, G. L. Mason, and A.

Baylot, "Calculating fractal parameters from low-resolution terrain profiles," *Journal of Terramechanics,* Vol.72, pp. 21–26, 2017.

[5] J.L. Kim, and K.D.Kim, "Prediction of shiver differentiation by the form alteration on the stable condition," *International Journal of Internet Broadcasting and Communication(IJIBC),* Vol.9, No.4, pp.8-13, 2017.

[6] J.L. Kim, and K.D. Kim, "Presentation of central motion techniques: limpness motion function and limpness sensory unit function," *International Journal of Advanced Culture Technology(IJACT)*, Vol.4, No.3, pp.56-61, 2016.

[7] J.L. Kim, and H.J. Kim, "A Study of energy conversion by the penetration control in the skin," *Journal of the Convergence on Culture Technology(JCCT)*, Vo.3, No.1, pp.43-48, 2017.

[8] J.L. Kim, K.S. Hwang, Y.S. Nam, "Assessment of the Posture Function by Head Movement," *The Journal of IIBC(JIIBC),* Vol.14, No.5, pp.131-135, 2014.

[9] J.L.Kim, and Hwang, K.S., "Study of quake wavelength of dynamic movement with posture," *International Journal of Advanced Smart Convergence(IJASC)*, Vol.4, No.1, pp.99-103, 2015.

[10] J. Huiting, H. Flisijn, ABJ. Kokkeler, and GJM. Smit, "Exploiting phase measurements of EPC Gen2 RFID tags," *IEEE Int Conf RFID-Technol Appl (RFID-TA)*, pp.1–6, 2013.

[11] A. Bekkali, SC Zou., A. Kadri, M. Crisp, and RV. Penty, "Performance analysis of passive UHF RFID systems under cascaded fading channels and interference effects," *IEEE Trans Wirel Commun*, Vol.14, No.3, pp.1421–33, 2015.

[12] E DiGiampaolo., and F. Martinelli, "Mobile robot localization using the phase of passive UHF RFID signals," *IEEE Trans Ind Electron,* Vol.61, No.1, pp.365–76, 2014;.

[13] K. Chawla, C. McFarland, G. Robins, and C. Shope, "Real-time RFID localization using RSS," in: 2013 International Conference on Localization and GNSS (ICL-GNSS), Turin (Italy), pp.1–6, (25–27 June) 2013.