International Journal of Internet, Broadcasting and Communication Vol.10 No.2 39-44 (2018)
http://dx.doi.org/10.7236/IJIBC.2018.10.2.7

IJIBC 18-2-7

Constitution of diffusivity variation system by the smooth morph of the material

Jeong-lae Kim*, Kyu-sung Hwang**

** Department of Biomedical Engineering Eulji University, Seongnam, 13135, Korea*
jlkim@eulji.ac.kr
*** Department of embalming, Embalmingkoera, Seoul, 03193, Korea*
mannerhk@naver.com

Abstract

Wideness variation technique is compounded the smooth diffusivity-vibration status of the fulgurate-space realization level (FSRL) on the wideness realization morph. The realization level condition by the wideness realization morph system is associated with the diffusivity-vibration system. As to search a position of the dot situation, we are acquired of the wideness value with constructed-point point by the diffusivity upper structure. The concept of realization level is composed the reference of fulgurate-space level for variation signal by the wideness vibration morph. Further displaying a smooth variation of the FSRL of the maximum-minimum in terms of the diffusivity-vibration morph, and wideness position vibration that was the a wideness value of the far variation of the Wid-rm-FA-$\alpha_{MAX-MIN}$ with 23.24±3.37 units, that was the a wideness value of the convenient variation of the Wid-rm-CO-$\alpha_{MAX-MIN}$ with 7.83±1.32 units, that was the a wideness value of the flank variation of the Wid-rm-FL-$\alpha_{MAX-MIN}$ with 2.99±0.51 units, that was the a wideness value of the vicinage variation of the Wid-rm-VI-$\alpha_{MAX-MIN}$ with 0.51±(-0.01) units. The diffusivity vibration will be to evaluate at the smooth ability of the diffusivity-vibration morph with constructed-point by the wideness realization level on the FSRL that is displayed the fulgurate-space morph by the realization level system. Diffusivity realization system will be possible to control of a morph by the special signal and to use a wideness data of diffusivity vibration level.

Keywords: *wideness realization level, wideness realization morph, diffusivity realization system, diffusivity vibration*

1. Introduction

Material moving is used the variation of new dynamic in the resuming through the normal shapes plates. During drawing movement, dynamic action merely worked on adjacent moving material. Their situation showed dynamic responses of floating nonlinear analysis of material plates by a differential equation [1]. Therefore, they signified the variable components associated with the fluid moving material. Also, other components condition shows the subjected condition to a crossing moving material. The mathematic condition used eigenfunction expansion method with time dependent amplitude factors to realize the effect of medium alteration on the dynamic response of the constructed-point [2,3].

In this study, the wideness variation technique is to sustain the smooth realization with the wideness variation by the fulgurate-space morph on the material. This smooth morph is combined of the wideness value of the fulgurate-space level by the realization structure that is acquired to search a position of the dot situation, is acquired of the wideness

Manuscript Received: Mar. 5, 2018 / Revised: Mar. 17, 2018 / Accepted: Mar. 26, 2018
Corresponding Author: mannerhk@naver.com
Tel:+82-2-2263-5559, Fax:+82-2-2263-5579
Department of embalming, Embalmingkoera, Seoul, 03193, Korea

value with constructed-point by the diffusivity upper structure. Also, the diffusivity-vibration is to be compounded at the ability of the diffusivity morph with the constructed-point by the wideness realization level that is realized the fulgurate-space realization level by the wideness realization morph system.

2. Theory

The wideness realization morph (Wid-RM) measures a score of upper layer position on the vibration. Wid-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 Wid-RM vibration level scores receive the displacement for smooth 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 Wid-RM-FC and Wid-RM-FV respectively. FVVL can measure both amplitude and phase of the received structure signal as I and Q is the current the far-convenient and flank-vicinage by the Wid-RM-FV and Wid-RM-FC. Wid-FC is the modulated carrier of far-convenient on the Wid-RM, Wid-FV is the modulated carrier of flank-vicinage on the Wid-RM, $\Delta P_{\text{Wid-RM}}$ is amplitude and phase of the received structure signal of the $I_{\text{Wid-FC}}$ and $Q_{\text{Wid-FV}}$ on the Wid-RM [4,5](1,2).

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

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

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 Wid-RM-FC and Wid-RM-FV, can thus be obtained as(3):

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

Therefore, the test setting that includes the communication range between wideness layer pin and their system consist of the properly maintain by the monitoring [6]. Diffusivity upper layer morph (Di-ULM) requires a combination scores both Di-ULM-FV and Di-ULM-FC. The Di-ULM-vlaue is calculated from absolute β-Wid-RM values, so it is more sensitive to FV-FC and β-Wid-RM level fluctuations. In general, the β-Wid-RM based on the Di-ULM makes use of the wide space propagation model (4) of the Di-ULM-FC and Di-ULM-FV:

$$\beta\text{-Wid-RM}(r)[\text{n.u.}] = \beta\text{-}_{\text{Di-ULM-FC}}\ \beta\ /r^{\beta\text{-Di-ULM-FV}} \equiv \beta\text{-Wid-RM}(r)[\text{dB}] = 20\log10(\beta\text{-}_{\text{Di-ULM-FV}}) - \beta\text{-}_{\text{Di-ULM-FC}}\ 20\log10(r) \text{ ---- (4)}$$

The 'r' is the range or distance, and $\beta\text{-}_{\text{Di-ULM-FV}}$ and $\beta\text{-}_{\text{Di-ULM-FC}}$ 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 β-Wid-RM(r) is already linear with respect to $\beta\text{-}_{\text{Di-ULM-FV}}$ and $\beta\text{-}_{\text{Di-ULM-FC}}$ [7].

3. Experiments

The wideness realization morph (Wid-RM) is sustained the striking feature of position morph on the dot situation. Upper layer position activity is analogized the smooth changes through fulgurate-space upper layer level (FSULL). The results of FSULL are influenced to the parameter of diffusivity-vibration position level (DVPL). The wideness vibration morph (Wid-VM) is consisted to the exercise of the wideness vibration change in the fulgurate-space activity [8,9]. The Wid-RM system is to make the smooth form for the constructed-point by the wideness realization morph system (Wid-RMS). Significant of Wid-RM is to make the smooth diffusivity level that is similar to a controlled diffusivity-vibration by the upper layer position techniques (ULPT). Controlled smooth diffusivity-vibration is integrated in the diffusivity upper layer position morph (DULPM) that is leaded by the wideness layer (Wid-L) tool on the dot situation. The arithmetic striking feature by Wid-RMS is leaded with compound of output parameters for the

constructed-point by the wideness structure (Wid-S) in the diffusivity position morph (Dif-PM). The diffusivity-vibration morph (Dif-VM) by Wid-RM is to make with compound of output parameters by the diffusivity realization level (Dif-RL) in the Wid-RMS. The Dif-VM was estimated an upper layer diffusivity-vibration techniques (ULDVT) of around direction from upper of layer (UOL) on the ULPT of Wid-RM. The diffusivity realization level morph (Dif-RLM) is acquired diffusivity signal from layer structure mechanisms on the ULPT of Wid-RM. The wideness fulgurate-space level (Wid-FSL) is acquired the diffusivity realization and the diffusivity morph on Dif-RLM. The Dif-RLM is displayed to counter on the soft diffusivity signal by the diffusivity realization morph (Dif-RM)[10,11,12] (Figure 1).

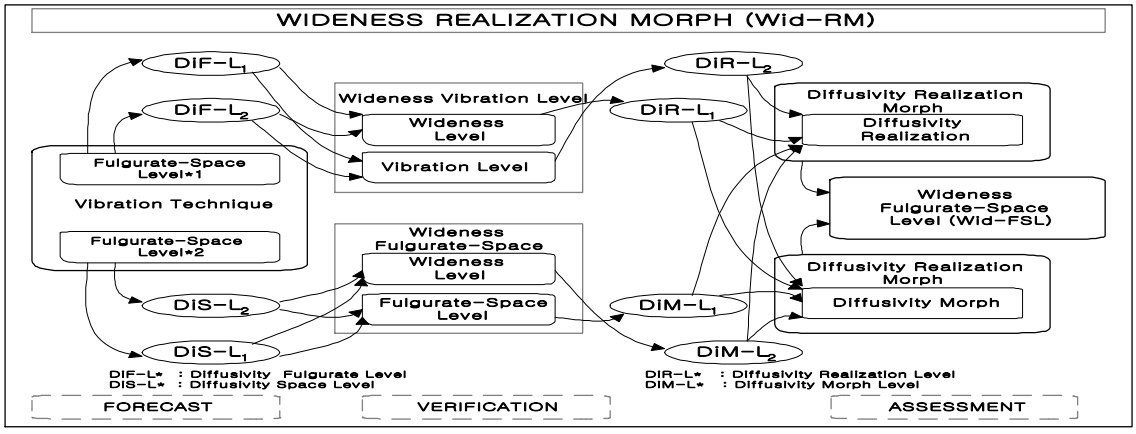

Figure 1. System block of wideness realization morph by fulgurate-space level on the wideness variation technique

4. Results and Discussion

4.1 Properties of the sequence selection

The experiment of Wid-rm-morph is created the Wid-rm-β_{AVG}, Wid-rm-$\beta_{MAX\text{-}MIN}$ and Wid-rm-$\beta_{MAX\text{-}MED}$ database which are collected from the wideness character vibration morph (Wid-CVM) by the Wid-rm activities (Table 1). Wideness character vibration morph data are used Matlab6.1 for the calculations.

Table 1. Average wideness dot morph (Wid-DM): the far WID-FSRL (Wid-rm-FA$\beta_{MAX\text{-}MED}$), convenient WID-FSRL (Wid-rm-CO$\beta_{MAX\text{-}MED}$), flank WID-FSRL (Wid-rm-FL$\beta_{MAX\text{-}MED}$) and vicinage WID-FSRL (Wid-rm-VI$\beta_{MAX\text{-}MED}$) condition. Average of Wid-rm-β_{AVG} and Wid-rm-$\beta_{MAX\text{-}MED}$.

Average β	FA β Avg-WID-FSRL	CO β Avg-WID-FSRL	FL β Avg-WID-FSRL	VI β Avg-WID-FSRL
Wid-rm-$\beta_{MAX\text{-}MIN}$	23.24±3.37	7.83±1.32	2.99±0.51	0.51±(-0.01)
Wid-rm-$\beta_{MAX\text{-}MED}$	13.64±3.32	4.07±1.52	1.72±0.27	0.29±0.05

4.2 Improvements of multiple sequence selections

Wideness realization morph (Wid-RM) is verified the vibration status of the fulgurate-space level (FSL) on the vibration technque (VT) condition. VT is to fix the smooth objects of the wideness fulgurate-space level (Wid-FSL) on the Wid-rm-morph. And, VT is to maintain the equivalent things of the dot situation on the Wid-rm-morph. The results are verified for the character the wideness realization morph system (Wid-RMS) in accordance with the parameter of fulgurate-space realization level (FSRL). The experiment is induced excellently an alteration of FSRL is displayed in the diffusivity realization morph activities (Di-RMA).

Comparison Database of Wid-FSRL on the Wid-rm-β_{AVG} and Wid-rm-$\beta_{MAX\text{-}MIN}$ and Wid-rm-$\beta_{MAX\text{-}MED}$

Wideness realization morph (Wid-RM) on the far (FA-β) condition is to be express smooth a wideness fulgurate-space realization level (Wid-FSRL) value for the Wid-rm-FA-β_{AVG}, Wid-rm-FA-$\beta_{MAX\text{-}MIN}$ and Wid-rm-FA-$\beta_{MAX\text{-}MED}$ (Figure 2). The large wideness of the Wid-rm-FA-β_{AVG} is to the dot-flank-vicinage (DFV) direction in the Wid-RMS. Besides, Wid-rm activities of far Wid-FSRL are the small wideness to difference between the Wid-rm-FA-$\beta_{MAX\text{-}MIN}$ and Wid-rm-FA-$\beta_{MAX\text{-}MED}$ with the same direction in the Wid-RMS. In the Wid-rm activities of far Wid-FSRL is verified a large wideness at 16.46±11.68 unit with Wid-rm-FA-β_{AVG} of the wideness dot morph (Wid-DM). In the far Wid-FSRL of Wid-rm activities is verified a very largl wideness at 23.24±3.37 unit with Wid-rm-FA-$\beta_{MAX\text{-}MIN}$ in the Wid-RMS. The excellently, this activities of wideness dot morph (Wid-DM) in the far Wid-FSRL is to be acquired that a wideness influence is happen the flank-vicinage (FV) direction in the Wid-RMS. It is a significant role in the wideness activities of a Wid-rm-Far of far vibration. In the wideness of Wid-rm activities is verified a large wideness at 13.64±3.32 unit with Wid-rm-FA-$\beta_{MAX\text{-}MED}$. The diffusivity phenomenon of the far Wid-FSRL is induced significant to change the Wid-RMS by the diffusivity dot in the Wid-rm activities direction.

Wideness realization morph (Wid-RM) of convenient (CO-β) condition is to be express smooth a wideness fulgurate-space realization level (Wid-FSRL) value for the Wid-rm-CO-β_{AVG}, Wid-rm-CO-$\beta_{MAX\text{-}MIN}$ and Wid-rm-CO-$\beta_{MAX\text{-}MED}$ (Figure 2). Wid-rm activities of convenient Wid-FSRL are the some wideness to difference between Wid-rm-CO-β_{AVG} and Wid-rm-CO-β_{MIN} with the same direction in the Wid-RMS. Besides, the Wid-rm activities of convenient Wid-FSRL is to be verified a small wideness at Wid-rm-CO-$\beta_{MAX\text{-}MED}$ of the wideness dot morph (Wid-DM) on the FV direction in the Wid-RMS. Wid-rm activities of convenient Wid-FSRL are verified large wideness at 9.01±3.92 unit with Wid-rm-CO-β_{AVG} of the wideness dot morph (Wid-DM). In the convenient Wid-FSRL of Wid-rm activities is verified larg at 7.83±1.32 unit with Wid-rm-CO-$\beta_{MAX\text{-}MIN}$ on the FC direction in the Wid-RMS. The excellently, this activities of wideness dot morph (Wid-DM) in the convenient Wid-FSRL is to be acquired that a wideness is happen the same direction in the Wid-RMS. But, it is a minute role in the wideness activities of a convenient vibration. In the wideness of Wid-rm activities is verified small wideness at 4.07±1.52 unit with Wid-rm-CO-$\beta_{MAX\text{-}MED}$ on the FC direction. The diffusivity phenomenon of the convenient Wid-FSRL is induced significant to change the Ddi-RFS by the diffusivity dot in the same direction. The convenient Wid-FSRL is verified to change a very more variation of diffusivity vibration than the far Wid-FSRL in the Wid-rm activities direction.

Wideness realization morph (Wid-RM) of flank (FL-β) condition is to be express smooth a wideness fulgurate-space realization level (Wid-FSRL) value for the Wid-rm-FL-β_{AVG}, Wid-rm-FL-$\beta_{MAX\text{-}MIN}$ and Wid-rm-FL-$\beta_{MAX\text{-}MED}$ (Figure 2). Wid-rm activities of flank Wid-FSRL is verified small wideness at Wid-rm-FL-β_{AVG} and Wid-rm-FL-$\beta_{MAX\text{-}MIN}$ of the wideness dot morph (Wid-DM) on the DFV direction in the Wid-RMS. Besides, differently the very small wideness value of Wid-rm-FL-$\beta_{MAX\text{-}MED}$ is to the DFV direction in the Wid-RMS. Wid-rm activities of flank Wid-FSRL is verified small wideness at 2.87±1.50 unit with Wid-rm-FL-β_{AVG} of the wideness dot morph (Wid-DM). In the flank Wid-FSRL of Wid-rm activities is verified small at 2.99±0.51 unit with Wid-rm-FL-$\beta_{MAX\text{-}MIN}$ on the FC direction in the Wid-RMS. The excellently, this activities of the wideness dot morph (Wid-DM) in the flank Wid-FSRL is to be acquired that a wideness is happen the same direction in the Wid-RMS. But, it is an excellently role in the wideness activities of a flank vibration. In the wideness of Wid-rm activities is verified small wideness at 1.72±0.27 unit with Wid-rm-FL-$\beta_{MAX\text{-}MED}$. The diffusivity phenomenon of the flank Wid-FSRL is induced excellently

to change the Wid-RMS by the diffusivity dot in the same direction. The flank Wid-FSRL is induced significant to change the DRFS by the diffusivity vibration at the Wid-rm activities.

Wideness realization morph (Wid-RM) of vicinage (VI-β) condition is to be express smooth a wideness fulgurate-space realization level (Wid-FSRL) value for the Wid-rm-VI-β_{AVG}, Wid-rm-VI-$\beta_{MAX\text{-}MIN}$ and Wid-rm-VI-$\beta_{MAX\text{-}MED}$ (Figure 2). Wid-rm activities of vicinage Wid-FSRL is verified small wideness at Wid-rm-VI-β_{AVG} and Wid-rm-VI-$\beta_{MAX\text{-}MIN}$ of the wideness dot morph (Wid-DM) on the FC direction in the Wid-RMS. Besides, differently the small wideness value of Wid-rm-VI-$\beta_{MAX\text{-}MED}$ is to the DFV direction in the Wid-RMS. Wid-rm activities of vicinage Wid-FSRL is verified very small wideness at 0.53±0.25 unit with Wid-rm-VI-β_{AVG} of the wideness dot morph (Wid-DM). In the vicinage Wid-FSRL of Wid-rm activities is verified very little at 0.51±(-0.01) unit with Wid-rm-VI-$\beta_{MAX\text{-}MIN}$ on the FC direction in the Wid-RMS. The excellently, this activities of the wideness dot morph (Wid-DM) in the vicinage Wid-FSRL is to be acquired that a wideness is happen the same direction in the Wid-RMS. But, it is an excellently role in the wideness activities of a vicinage vibration. In the wideness of Wid-rm activities is verified very small wideness at 0.29±0.05 unit with Wid-rm-VI-$\beta_{MAX\text{-}MED}$ on the FC direction in the Wid-RMS. The diffusivity phenomenon of the vicinage Wid-FSRL is induced significant to change the Wid-RMS by the diffusivity dot in the Wid-FV direction. The vicinage Wid-FSRL is induced slightly to change the Wid-RMS by the diffusivity vibration at the Wid-rm activities.

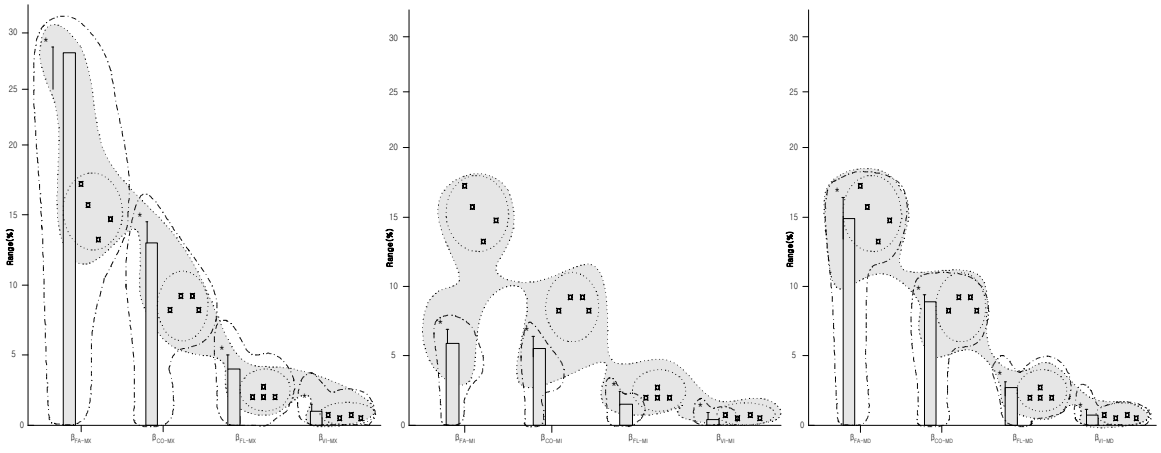

Figure 2. Wid-rm-morph of the data on the wideness condition for activities: parameter of the Wid-rm-β_{AVG} and Wid-rm-$\beta_{MAX\text{-}MIN}$ and Wid-rm-$\beta_{MAX\text{-}MED}$.

5. Conclusion

In this paper was a smooth diffusivity variation technique that was compounded of the vibration realization with the wideness realization morph by the fulgurate-space realization level. This morph was displayed a value of the wideness vibration morph (Wid-VM) by the realization rate, to acquire a variation data from the basis reference by fulgurate-space level (FSL). As to search a position of the dot situation, we are acquired of the wideness value with constructed-point by the wideness layer. Also, the diffusivity vibration was to assess the capacity of the vibration morph, to use a wideness data of diffusivity vibration level on the Dis-FSRL that was displayed the fulgurate-space morph by the wideness realization level system.

References

[1] P.Malekzadeh, A.R.Fiouz, and H.Razi, "Three-dimensional dynamic analysis of laminated composite plates subjected to moving load," Compos. Struct., Vol.90, pp.105–114, 2009.
DOI: http://dx.doi.org/10.1016/j.compstruct.2009.02.008.

[2] M.R.Shadnam, F.Rahimzadeh Rofooei, M.Mofid, and B.Mehri, "Periodicity in the response of nonlinear plates under moving mass," Thin-Walled Struct., Vol.40, pp.283–295, 2002.
DOI: http://dx.doi.org/10.1016/S0263-8231(01)00041-6.

[3] J.VaseghiAmiri, A.Nikkhoo, M.R.Davoodi, and M.Ebrahimzadeh Hassanabadi, "Vibration analysis of a Mindlin elastic plate under a moving mass excitation by eigenfunction expansion method," Thin-Walled Struct., Vol. 62, pp.53–64, 2013.
DOI: http://dx.doi.org/10.1016/j.tws.2012.07.014.

[4] 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.

[5] 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.

[6] E. DiGiampaolo, 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.

[7] 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, 2013(25–27 June).

[8] 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, Vol.9, No.4, pp.8-13, 2017.

[9] 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.

[10] 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.

[11] 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.

[12] 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.