Effect of Changing Oscillator Frequencies to Synchronization Phenomena in Coupled van der Pol Oscillators

Vu Minh Hien
Dept. of Elec. and Elec. Eng.,
Tokushima University
hien@ee.tokushima-u.ac.jp

Minh Hai Tran
Dept. of Elec. and Elec. Eng.,
Tokushima University
minhhai@ee.tokushima-u.ac.jp

Yoko Uwate and Yoshifumi Nishio
Dept. of Elec. and Elec. Eng.,
Tokushima University
{uwate, nishio}@ee.tokushima-u.ac.jp

SUMMARY

Synchronization phenomena are observed everywhere in our world, for example, firefly luminescence, birds and frogs crying, human aplause, etc. It has a long history of research and its applications can be widely found in many fields of science, such as chemical, physical, biological, and also social systems. Therefore, investigation of synchronization phenomena has become an important issue [1]-[2].

In this study, we use van der Pol oscillators coupled by one resistor as shown in Fig. 1 when the oscillator frequencies are changed [3]. By using computer simulations, we can observe the effect of the changing to synchronization phenomena in these coupled oscillators.

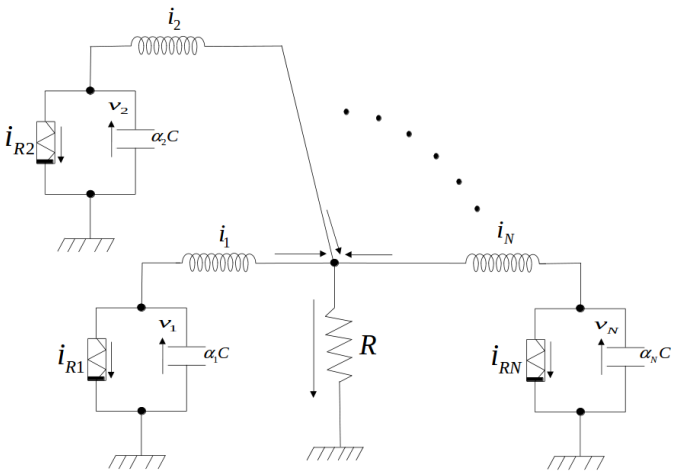

Fig. 1. Circuit model.

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