



[PremiumSoft Navicat Premium Enterprise V9.1.8 Keygen Serial | Kk Full Version](#)

where

$$\alpha = \frac{(w_1 + w_2) + \sqrt{(w_1 + w_2)^2 - 4c}}{2} \quad (6)$$

$$\beta = \frac{(w_1 + w_2) - \sqrt{(w_1 + w_2)^2 - 4c}}{2} \quad (7)$$

Of course, the number of trees in graph  $G_n$  according to (3) and (5) will be

$$D_n = d \frac{\alpha^n - \beta^n}{\alpha - \beta}. \quad (8)$$

It is interesting to note that for a ladder graph, equation (3a) generates the even index terms of the sequence of Fibonacci numbers, which agrees with Bubnicki's result [6].

W. GRUSZCZYNSKI  
Dept. of Telecommunication  
Technical University of Gdańsk  
Gdańsk, Poland

#### REFERENCES

- [1] S. D. Bedrosian, "Generating formulas for the number of trees in a graph," *J. Franklin Inst.*, vol. 277, pp. 313-326, April 1964.
- [2] —, "The concept of uniform branch multiplicity in graphs," *Nachrichtstechnik Z.*, pp. 581-582, November 1964.
- [3] Y. H. Kim and S. D. Bedrosian, "On topological approaches to network theory," *J. Franklin Inst.*, vol. 279, pp. 11-21, January 1965.
- [4] L. E. Clarke, "On Cayley's formula for counting trees," *J. London Math. Soc.*, vol. 23, October 1948.
- [5] L. Weisner, "Number of trees in a graph," *Proc. IRE (Correspondence)*, vol. 44, pp. 1653-1655, December 1956.
- [6] K. A. Polian, "On the number of trees for a network," *IRE Trans. on Circuit Theory (Correspondence)*, vol. CT-7, pp. 175-179, June 1960.
- [7] S. Stein and M. M. Rand, *Linear Graphs and Electrical Networks*, Reading, Mass.: Addison-Wesley, 1951.
- [8] J. Naus and H. L. Schmid, *Mathematisches Vierfarbenbuch*, vol. II, Berlin: Akademie-Verlag GmbH, 1961.
- [9] Z. Bubnicki, "Input impedance and transfer function of a ladder network," *IEEE Trans. on Circuit Theory (Correspondence)*, vol. CT-10, pp. 286-287, June 1963.

### *n*-Port Rectangular-Shaped Distributed RC Networks

#### 1. INTRODUCTION

Being a model for the molecular electronic system, distributed RC (resistance capacitance) networks have drawn considerable attention during the last decade. Following others [1]-[7], Heizer [8]-[10] first pointed out that distributed systems can also be made to have rational short-circuit admittance parameters by choosing appropriate geometry of a two-port rectangular three-layer structure. Later, Barker [11] and Woo and Huve [12] applied his result to practical circuit realizations. Huve introduced a condition for giving the rational functions but did not mention the uniqueness.

This correspondence, using a different but simpler derivation, furnishes a necessary and sufficient condition for generating rational functions of that structure. Furthermore, it is generalized to *n*-port structures. While the formulation may seem deceptively simple, it does present a unified and comprehensive analysis of the various network properties which are indispensable to the synthesis problem. In the limiting case, the resulting solution can also provide an insight into the transcendental network functions.

#### II. THE BASIC DIFFERENTIAL EQUATION

Consider the network representation of an elementary length,  $\Delta x$ , of a layer structure with both normalized dimensions and

Manuscript received December 13, 1965; revised February 7, 1966. This work was supported by NASA Grant NGR 44-007-008.

coordinates (Fig. 1).  $C_a(x)$  and  $C_b(x)$  are the capacitance per unit length in the  $x$ -direction between the resistive film and the lower and the upper conductors, respectively. The resistive film has a resistance  $R$  per unit length in the  $x$ -direction, but no resistance in the  $y$ -direction.<sup>1</sup>  $J_a(x)$  and  $J_b(x)$  are currents per unit length, directed in the  $x$ -direction.  $I_0(x)$  is the current in the resistive film in the  $x$ -direction.  $v(x)$  is the voltage across the capacitance  $C_a(x)$ . Further, we assume that the wavelength in the dielectric is much longer than the dimensions of the structure. Then,

$$v(x) - I_0(x)R\Delta x - v(x + \Delta x) = 0 \quad (1)$$

and

$$sC_a(x)\Delta x v(x) + I_0(x) - sC_b(x)\Delta x V - v(x) \\ - I_0(x + \Delta x) = 0. \quad (2)$$

Eliminate  $I_0(x)$  from (1) and (2) to give

$$\frac{v(x + \Delta x) - 2v(x) + v(x - \Delta x)}{(\Delta x)^2} \\ + s(C_a(x) + C_b(x))Rv(x) - sC_b(x)RV = 0. \quad (3)$$

If the second derivative of  $v(x)$  exists, the difference equation becomes the following second-order linear differential equation as  $\Delta x \rightarrow 0$ ,

$$\frac{d^2v(x)}{dx^2} - sR(C_a(x) + C_b(x))v(x) = -sC_b(x)RV. \quad (4)$$

Equation (4), an analogy of the telegraph equation of the transmission lines, is considered as the differential equation for the structure shown in Fig. 2.

#### III. RECTANGULAR LAYER STRUCTURES

In Fig. 3, a distributed circuit is illustrated. The resistive film has  $R$  ohms per unit length in the  $x$ -direction, and no resistance in the  $y$ -direction. The total capacitance due to the dielectric between the resistive film and the conductors in the  $x$ -direction per unit length is  $C$  farads. The conductor is cut into  $(n+1)$  pieces (Fig. 3); the voltage at conductor 0 is the reference. The capacitance between the film and the conductor  $k$  is  $C_k(x)$ ,  $k = 0, 1, \dots, n$ . Thus, this structure is actually an *n*-port network (Fig. 4). The short-circuit parameters can be obtained as follows.

a)

$$y_{ii} = \left. \frac{I_i}{V_i} \right|_{V_i=0} \quad k = 1, 2, \dots, n; \quad k \neq i. \quad (5)$$

Let

$$C_a(x) = C - C_i(x), \quad C_i(x) = C_j(x), \quad V = V_i$$

be substituted into (4):

$$\frac{d^2v(x)}{dx^2} - \gamma^2 v(x) = -\gamma^2 f_i(x)V_i. \quad (6)$$

The general solution of (6) is

$$v(x) = Ae^{rx} + Be^{-rx} + V_i g_i(r, x), \quad (7)$$

where  $g_i(r, x) = (1 - D^2/\gamma^2) f_i(x)$  is not an algebraic equation; its right side expresses the operation of  $(1 - D^2/\gamma^2)^{-1}$  on the function  $f_i(x)$  with  $D = d/dx$ .  $A$  and  $B$  can be determined from the two boundary conditions,

<sup>1</sup> This assumption can be realized approximately by making many conducting stripes parallel to the  $y$ -axis on the resistive film. However, by using uniform resistive film instead, Barker [11] and Woo and Huve [12] obtained experimental results which agree fairly close to the theoretical calculations under this assumption.

---

[PremiumSoft Navicat Premium Enterprise V9.1.8 Keygen Serial | Kk Full Version](#)



---

PremiumSoft Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ] ... Navicat არის პრემიუმ პლატფორმა .... CRACK  
PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk · TuneUp Utilities ... WinRAR 4.00 32Bit And 64Bit  
Full-Version {Maxx-SPD} 64 bit.

TomTom-Navigator-7.450-(9028)-for-Windows-Mobile-with-keygen.rar. 27 MB. +1. Corel Draw KeyGen all Version.zip. 65 kB. +1 ... Internet Download Manager (IDM) 6.18 Build 12 Full Including Keygen+Patch @ Only Upload Mughal.zip. 6 MB. +1 ... PremiumSoft Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ].rar.. HACK PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk · PATCHED ... full keygen · FULL Sound Quest Midi Quest 11 Pro v11.0.0-R2R [deepstatus] ... Oxford Collocations Dictionary 2nd Edition 2009 download pc · CRACK ....  
PremiumSoft\_Navicat\_Premium\_12.1.9\_x64\_keygen\_patch.rar.torrent. 73 kB. 0 ... PremiumSoft Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ].rar. 62 MB. +1 ... PremiumSoft Navicat Premium Enterprise Edition v10 0 6 Incl Keygen Lz0.rar. 33 MB. 0 ... Monika FULL.rar. 91 MB. 0 ...

premiumSoft navicat premium Enterprise v9 1 8 keygen serial. ... Full 2008 crack PremiumSoft Navicat for SQLite Enterprise Edition v ... Velikost 141 B . PremiumSoft Navicat Premium Enterprise v9.1.8 KeygenSerial kk .rar .rar ...

GiliSoft File Lock Pro 10.8.0 Crack + Serial Number Full Version Free ... PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk .. url=- Premiumsoft navicat for oracle enterprise edition v9.0.15 in (Premiumsoft navicat for oracle . ... BT\_premiumSoft navicat premium Enterprise v9.1.8 +keygen+Serial ... premium Enterprise v9.1.8 +keygen+Serial [ kk ] Edition.v9.0.15. ... of Navicat for PostgreSQL version 11.2, with full support New version .... CRACK Atomix VirtualDJ Pro Infinity 8.2.3798 Keygen Patch · CRACK Atomix ... FULL Sound Quest Midi Quest 11 Pro v11.0.0-R2R [deepstatus] · HACK PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk · TuneUp Utilities 2011 ... Oxford Collocations Dictionary 2nd Edition 2009 download pc · ThunderSoft .... Kk download free.navicat version 12.full transcript.download premiumsoft navicat for sqlite enterprise edition v9.1. Or any other file from ...

Aayirathil Oruvan 2010 Hd Full Movie Uncut Version 16 ... PremiumSoft Navicat Premium Enterprise v9.1.8 Keygen Serial [ kk full version. Navicat Premium Crack is a secure, easy to use, powerful, and ... SQLite database only from a single application (Navicat Premium 12 Full Version). ... %ProgramFiles%\PremiumSoft\Navicat Premium; Click on generate and ... September 9, 2020 ... EViews 10 Enterprise Edition Keygen + Patch For Free .... Directory Listing For /PremiumSoft Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ]/ - Up To /. Filename, Size, Last Modified. Instructions.txt, 1.1 kb, Wed, ....  
PremiumSoft Navicat Premium Enterprise v9.1.8 Keygen Serial [ kk ] ... Audialsone 8 Keygen Crack Serial Keygen Full Download; Audialsone ... And Family Tree Maker 2011 is our best version yet packed with more than 100 .. PremiumSoft Navicat Premium Enterprise v9.1.8. სასი : PremiumSoft Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ].rar (30,190.3 KB - განდ 457 ) .... Navicat for MySQL all versions serial number and keygen, Navicat for ... PremiumSoft Navicat Premium Enterprise 11.2.14 Full Patch; Navicat ... system Navicat Premium Enterprise v9.1.8 +Keygen+Serial [ kk ].torrent 1.. PremiumSoft Navicat Premium Enterprise V9.1.8+Keygen+Serial [ Kk ... Incl.PremiumSoft Navicat Premium Enterprise Edition 10.0.9 31.3 Mb .... Ann has 11 comments: serial number macromedia fireworks 8, serial number ... Recuva 1.52.1086 Professional Serials {B4tman} full version ... HACK PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk · PATCHED .. Navicat Premium - 15 0 14 x86 x64 incl Keygen 7 MB PremiumSoft Navicat Premium 12.0.23 + x64 + patch - Crackingpatc 92 MB Navicat Premium ... NaviCat for MySQL Version 8.2.12 + Serial ... PremiumSoft Navicat Premium Enterprise v9.1.8+Keygen+Serial [ kk ... Navicat Premium 12.0.28 Full With Medicine[BabuPC]. 0273d78141