



< Back to results | 1 of 1

Download Print Save to PDF Save to list Create bibliography

Science and Technology Indonesia • Open Access • Volume 7, Issue 1, Pages 49 - 57 • January 2022

Document type

Article • Gold Open Access

Source type

Journal

ISSN

25804405

DOI

10.26554/sti.2022.7.1.49-57

View more

Validation of Improved Dynamic Spectrum and Traffic Management Models of Internet Pricing of Fair DSL-LTE Multiple QoS Network

Puspita, Fitri Maya; Arda, Syalia; Sitepu, Robinson; Yunita; Yuliza, Evi; Octarina, Sisca; Yahdin, Sugandi

Save all to author list

^a Department of Mathematics, Faculty of Mathematics and Natural Sciences, Sriwijaya University, Palembang, 30862, Indonesia

1 48th percentile Citation in Scopus	0.33 FWCI	9 Views count	View all metrics
---	--------------	------------------	------------------

View PDF Full text options Export

Abstract

Author keywords

Sustainable Development Goals 2023

SciVal Topics

Metrics

Funding details

Abstract

Currently, the development of communication technology is very rapid, especially on the internet. Therefore, with the increasing need for the internet, the quality of service must also be improved. This study aims to analyze the sensitivity of the internet pricing scheme model using the modified Cloud Radio Access Network (C-RAN) model with the addition of the fair network traffic management variable and combined with the Constant Elasticity of Substitution (CES) utility function. C-RAN is a centralized radio access network to process signals and send them to the core network where the equipment used is connected to cellular antennas. The improved C-RAN model is modified into 2 cases, each of which has 3 pricing schemes, namely flat-fee, usage-based and two-part tariff, with the provision of initial usage and a predetermined amount of bandwidth consumption. This research data are secondary data obtained from the local server of local server traffic data in Palembang. Based on the analysis that has been done, the results of this study indicate that the improved C-RAN model can be utilized by Internet

Cited by 1 document

Mathematical Model of Traffic Management-Perfect Substitute-Selfish User Scheme

Puspita, F.M. , Indriani, P.E. , Yuliza, E. (2022) 2022 5th International Seminar on Research of Information Technology and Intelligent Systems, ISRITI 2022

View details of this citation

Inform me when this document is cited in Scopus:

Set citation alert

Related documents

Information Services Financing Scheme Model with Marginal Costs and Supervisory Costs for Modified Cobb-Douglas and Linear Utility Functions

Indrawati , Puspita, F.M. , Yuliza, E. (2022) 2022 5th International Seminar on Research of Information Technology and Intelligent Systems, ISRITI 2022

Mathematical Model of Traffic Management-Perfect Substitute-Selfish User Scheme

Puspita, F.M. , Indriani, P.E. , Yuliza, E. (2022) 2022 5th International Seminar on Research of Information Technology and Intelligent Systems, ISRITI 2022

Mathematical modelling on information service provider based independent goods utility function

Puspita, F.M. , Novesda, G. , Yuliza, E. (2023) AIP Conference Proceedings

View all related documents based on references



Find more related documents in Scopus based on:

Authors > Keywords >

Service Providers (ISPs) to increase profits. The results of the sensitivity analysis for the improved model show that, if the variable is infinity, the increase and decrease are not fixed, whereas if the variable is 0.000 then the increase and decrease are fixed. © 2022 The Authors.


Author keywords

C-RAN; Constant of Elasticity Substitution; Dynamic Spectrum; Sensitivity Analysis; Traffic Management

Sustainable Development Goals 2023  New 

SciVal Topics  



Metrics 

Funding details 

References (28)

[View in search results format >](#)

All

CSV export   Print  E-mail  Save to PDF

Create bibliography

1 Andersson, J.A.E., Rawlings, J.B.

Sensitivity Analysis for Nonlinear Programming in CasADi*
([Open Access](#))

(2018) *IFAC-PapersOnLine*, 51 (20), pp. 331-336. Cited 11 times.

<http://www.journals.elsevier.com/ifac-papersonline/>

doi: 10.1016/j.ifacol.2018.11.055

[View at Publisher](#)

2 Belghith, A., Trabelsi, S., Cousin, B.

Realistic per-category pricing schemes for LTE users

(2014) *2014 12th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks, WiOpt 2014*, art. no. 6850329, pp. 429-435. Cited 12 times.

ISBN: 978-390188263-0

doi: 10.1109/WIOPT.2014.6850329

[View at Publisher](#)

3 Bhattacharya, P.

A Growth Framework Using the Constant Elasticity of Substitution Model
(2017) *Journal of Applied Mathematics and Physics*, 5 (11), p. 2183. Cited 2 times.

4 Cheng, M.

A Grey CES Production Function Model and Its Application in Calculating the Contribution Rate of Economic Growth Factors

(2019) *Complexity*, 2019, art. no. 5617061. Cited 7 times.

<https://www.hindawi.com/journals/complexity/>

doi: 10.1155/2019/5617061

[View at Publisher](#)

-
- 5 Cunningham, K., Schrage, L.
The Lingo Algebraic Modeling Language Chapter 6
(2004) *Applied Optimization*, pp. 159-171. Cited 12 times.
Springer
-
- 6 Indrawati, I., Erlita, S., Nadeak, I.
Optimasi Model Cloud Radio Access Network (C-RAN) pada Efisiensi
Konsumsi Bandwidth dalam Jaringan
(2017) *Annual Research Seminar*, 3 (1), pp. 117-120. Cited 4 times.
-
- 7 Indrawati, Puspita, F.M., Silaen, B.O.M., Yuliza, E., Dwipurwani, O.
Selfish User Network Optimization with Cellular Network
Traffic Management Model Using Lingo 13.0 (Open Access)

(2020) *Science and Technology Indonesia*, 5 (2), pp. 53-58. Cited 2 times.
<https://sciencetechindonesia.com/index.php/jsti/article/view/205>
doi: 10.26554/sti.2020.5.2.53-58

View at Publisher
-
- 8 Indrawati, Puspita, F.M., Resmadona, Yuliza, E., Dwipurwani, O., Octarina, S.
Analysis of Information Service Pricing Scheme Model Based
on Customer Self-Selection (Open Access)

(2021) *Science and Technology Indonesia*, 6 (4), pp. 337-343. Cited 3 times.
<https://sciencetechindonesia.com/index.php/jsti/article/view/399/208>
doi: 10.26554/sti.2021.6.4.337-343

View at Publisher
-
- 9 Indrawati, Puspita, F.M., Yuliza, E., Dwipurwani, O., Putri, Y.E., Affriyanti
Improved cloud computing model of internet pricing schemes
based on Cobb-Douglas utility function (Open Access)

(2019) *Journal of Physics: Conference Series*, 1282 (1), art. no. 012003. Cited 3
times.
<http://iopscience.iop.org/journal/1742-6596>
doi: 10.1088/1742-6596/1282/1/012003

View at Publisher
-
- 10 Iosifidis, G., Gao, L., Huang, J., Tassiulas, L.
Efficient and fair collaborative mobile internet access
(Open Access)

(2017) *IEEE/ACM Transactions on Networking*, 25 (3), art. no. 7835266, pp.
1386-1400. Cited 56 times.
doi: 10.1109/TNET.2016.2638939

View at Publisher
-
- 11 Li, Y., Zhou, T., Yang, Y., Hu, H., Hamalainen, M.
Fair Downlink Traffic Management for Hybrid LAA-LTE/Wi-Fi
Networks (Open Access)

(2017) *IEEE Access*, 5, art. no. 7792119, pp. 7031-7041. Cited 22 times.
<http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6287639>
doi: 10.1109/ACCESS.2016.2642121

View at Publisher
-

- 12 Menth, M., Zeitler, N.
Activity-based congestion management for fair bandwidth sharing in trusted packet networks ([Open Access](#))

(2016) *Proceedings of the NOMS 2016 - 2016 IEEE/IFIP Network Operations and Management Symposium*, art. no. 7502817, pp. 231-239. Cited 6 times.
ISBN: 978-150900223-8
doi: 10.1109/NOMS.2016.7502817

View at Publisher
-
- 13 Montoya, J., Sethi, A., Gómez, N.G.
A load-based and fair radio access network selection strategy with traffic offloading in heterogeneous networks

(2018) *2018 7th International Conference on Computers Communications and Control, ICCCC 2018 - Proceedings*, pp. 193-202. Cited 6 times.
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8383963>
ISBN: 978-153861934-6
doi: 10.1109/ICCC.2018.8390458

View at Publisher
-
- 14 Nurajizah, S., Ambarwati, N. A., Muryani, S.
Sistem Pendukung Keputusan Pemilihan Internet Service Provider Terbaik Dengan Metode Analytical Hierarchy Process
(2020) *Jurnal Teknologi dan Sistem Informasi*, 6 (3), pp. 231-238. Cited 2 times.
(in Indonesia)
-
- 15 Peng, M., Li, Y., Jiang, J., Li, J., Wang, C.
Heterogeneous cloud radio access networks: A new perspective for enhancing spectral and energy efficiencies ([Open Access](#))

(2014) *IEEE Wireless Communications*, 21 (6), art. no. A22, pp. 126-135. Cited 391 times.
doi: 10.1109/MWC.2014.7000980

View at Publisher
-
- 16 Puspita, F.M., Seman, K., Taib, B.M.
The improved models of internet pricing scheme of multi service multi link networks with various capacity links ([Open Access](#))

(2015) *Lecture Notes in Electrical Engineering*, 315, pp. 851-862. Cited 8 times.
<http://www.springer.com/series/7818>
ISBN: 978-331907673-7
doi: 10.1007/978-3-319-07674-4_80

View at Publisher
-
- 17 Puspita, F.M., Wulandari, A., Yuliza, E., Sitepu, R., Yunita
End-to-end delay qos attribute-based bundling strategy of wireless improved reverse charging network pricing model ([Open Access](#))

(2021) *Science and Technology Indonesia*, 6 (1), pp. 30-38. Cited 4 times.
<http://sciencetechindonesia.com/index.php/jsti/article/view/265/163>
doi: 10.26554/sti.2021.6.1.30-38

View at Publisher

- 18 Indrawati, Puspita, F.M., Yuliza, E., Dwipurwani, O., Putri, Y.E., Affriyanti
Improved cloud computing model of internet pricing schemes based on Cobb-Douglas utility function (Open Access)

(2019) *Journal of Physics: Conference Series*, 1282 (1), art. no. 012003. Cited 3 times.
<http://iopscience.iop.org/journal/1742-6596>
doi: 10.1088/1742-6596/1282/1/012003

View at Publisher
-
- 19 Puspita, F.M., Yuliza, E., Herlina, W., Yunita, Rohania
Improved Multi-Service-Reverse Charging Models for the Multi-link Internet wireless Using Bit Error Rate QoS Attribute (Open Access)

(2020) *Science and Technology Indonesia*, 5 (1), pp. 6-13. Cited 5 times.
<https://scinetechindonesia.com/index.php/jsti/article/view/206>
doi: 10.26554/sti.2020.5.1.6-13

View at Publisher
-
- 20 Quaas, M.F., Baumgärtner, S., Drupp, M.A., Meya, J.N.
Intertemporal utility with heterogeneous goods and constant elasticity of substitution (Open Access)

(2020) *Economics Letters*, 191, art. no. 109092. Cited 7 times.
<http://www.elsevier.com/homepage/sae/econbase/ecolet/>
doi: 10.1016/j.econlet.2020.109092

View at Publisher
-
- 21 Romdhoni, A. H., Wahyuddin, M., Riyardi, A.
(2015) *Analisis Fungsi Produksi Frontier Constant Elasticity Substitution Industri Makanan Hingga Pakaian Jadi Di Provinsi Jawa Tengah*, pp. 1-15. University Research Colloquium, ISSN 2407-9189; (in Indonesia)
-
- 22 Sasidhar, T., Havisha, V., Koushik, S., Deep, M., Krishna Reddy, V.
Load balancing techniques for efficient traffic management in cloud environment

(2016) *International Journal of Electrical and Computer Engineering*, 6 (3), pp. 963-973. Cited 14 times.
<http://www.iaescore.com/journals/index.php/IJECE/article/view/449/324>
doi: 10.11591/ijece.v6i3.7943

View at Publisher
-
- 23 Sitepu, R., Puspita, F.M., Kurniadi, E., Yunita, Apriliyani, S.
Mixed integer nonlinear programming (MINLP)-based bandwidth utility function on internet pricing scheme with monitoring and marginal cost (Open Access)

(2019) *International Journal of Electrical and Computer Engineering*, 9 (2), pp. 1240-1248. Cited 7 times.
<http://www.iaescore.com/journals/index.php/IJECE/article/view/9952/10567>
doi: 10.11591/ijece.v9i2.pp.1240-1248

View at Publisher
-
- 24 Stechlinski, P., Jäschke, J., Barton, P.I.
Generalized sensitivity analysis of nonlinear programs using a sequence of quadratic programs

(2019) *Optimization*, 68 (2-3), pp. 485-508. Cited 4 times.
<http://www.tandf.co.uk/journals/titles/02331934.asp>
doi: 10.1080/02331934.2018.1517159


View at Publisher

- 25 Stechliniski, P., Khan, K.A., Barton, P.I.
Generalized sensitivity analysis of nonlinear programs
(2018) *SIAM Journal on Optimization*, 28 (1), pp. 272-301. Cited 12 times.
<https://epubs.siam.org/doi/pdf/10.1137/17M1120385>
doi: 10.1137/17M1120385
View at Publisher

- 26 Tsiakflakis, P., Yi, Y., Chiang, M., Moonen, M.
Throughput and delay performance of dsl broadband access
with cross-layer dynamic spectrum management ([Open Access](#))
(2012) *IEEE Transactions on Communications*, 60 (9), art. no. 6226903, pp.
2700-2711. Cited 9 times.
doi: 10.1109/TCOMM.2012.062512.110385
View at Publisher

- 27 Wu, S.-Y., Banker, R.D.
Best pricing strategy for information services ([Open Access](#))
(2010) *Journal of the Association for Information Systems*, 11 (6), pp.
339-366. Cited 53 times.
<http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1541&context=jais>
doi: 10.17705/1jais.00229
View at Publisher

- 28 Wu, H., Liu, L., Zhang, X., Ma, H.
Quality of video oriented pricing incentive for mobile video
offloading
(2016) *Proceedings - IEEE INFOCOM*, 2016-July, art. no. 7524561. Cited 17
times.
<http://ieeexplore.ieee.org/>
ISBN: 978-146739953-1
doi: 10.1109/INFOCOM.2016.7524561
View at Publisher

 Puspita, F.M.; Department of Mathematics, Faculty of Mathematics and Natural
Sciences, Sriwijaya University, Palembang, Indonesia; email:fitrimayapusita@unsri.ac.id
© Copyright 2022 Elsevier B.V., All rights reserved.

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#)

All content on this site: Copyright © 2024 Elsevier B.V. ↗, its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the Creative Commons licensing terms apply.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies ↗.

