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An Efficient System to Access Network Using Time Based Scheduling and Automatic Database Creation Using Data Perturbation

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Abstract: ***With the wide deployment of public cloud computing infrastructures the time constrain based system is required. Using clouds to host data query services has become an appealing solution for the advantages on scalability and cost-saving. The time based scheduling to provide the net connectivity is a latest field to benefit both customer and service provider. The time based scheduling allows the customer to use net services for the purchased time with great speed. The same user can use the net for the duration he purchases. It is equally useful to the service provider as they don't need to provide any slow net connection even when the customer's data plan is over.***
Keywords: Public Cloud Infrastructure, Time Allocation, Net Scheduling.

I. INTRODUCTION

HOSTING data-intensive query services in the cloud is increasingly popular because of the unique advantages in scalability and cost-saving. With the cloud infrastructures, the service owners can conveniently scale up or down the service and only pay for the hours of using the servers. This is an attractive feature because the workloads of query services are highly dynamic, and it will be expensive and inefficient to serve such dynamic workloads with in-house infrastructures [2]. However, because the service providers lose the control over the data in the cloud, data confidentiality and query privacy have become the major concerns. Adversaries, such as curious service providers, can possibly make a copy of the database or eavesdrop users' queries, which will be difficult to detect and prevent in the cloud infrastructures. While new approaches are needed to preserve data confidentiality and query privacy, the efficiency of query services and the benefits of using the clouds should also be preserved. It will not be meaningful to provide slow query services as a result of security and privacy assurance. It is also not practical for the data owner to use a significant amount of in-house resources, because the purpose of using cloud resources is to reduce the need of maintaining scalable in-house infrastructures.

Therefore, there is an intricate relationship among the data confidentiality, query privacy, the quality of service, and the economics of using the cloud. We summarize these requirements for constructing a practical query service in the cloud as the CPEL criteria: data confidentiality, query privacy, efficient query processing, and low in-house processing cost. Satisfying these requirements will dramatically increase the complexity of constructing query services in the cloud. Some related approaches have been developed to address some aspects of the problem. However, they do not satisfactorily address all of these aspects. For example, the cryptoindex [12] and order preserving encryption (OPE) [1] are vulnerable to the attacks. The enhanced cryptoindex approach [14] puts heavy burden on the in-house infrastructure to improve the security and privacy. The New Casper approach [23] uses cloaking boxes to protect data objects and queries, which affects the efficiency of query processing and the inhouse workload. We have summarized the weaknesses of the existing approaches in Section 7. We propose the random space perturbation (RASP) approach to constructing practical range query and knearest- neighbor (kNN) query services in the cloud. The proposed approach will address all the four aspects of the CPEL criteria and aim to achieve a good balance on them. The basic idea is to randomly transform the multidimensional data sets with a combination of order preserving encryption, dimensionality expansion, random noise injection, and random project, so that the utility for processing range queries is preserved. The RASP perturbation is designed in such a way that the queried ranges are securely transformed into polyhedra in the RASP-perturbed data space, which can be efficiently processed with the support of indexing structures in the perturbed space. The RASP kNN query service (kNN-R) uses the RASP range query service to process kNN queries. The key components in the RASP framework include 1. the definition and properties of

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RASP perturbation; 2. the construction of the privacy-preserving range query services; 3. the construction of privacy-preserving kNN query services; and 4. An analysis of the attacks on the RASP-protected data and queries.

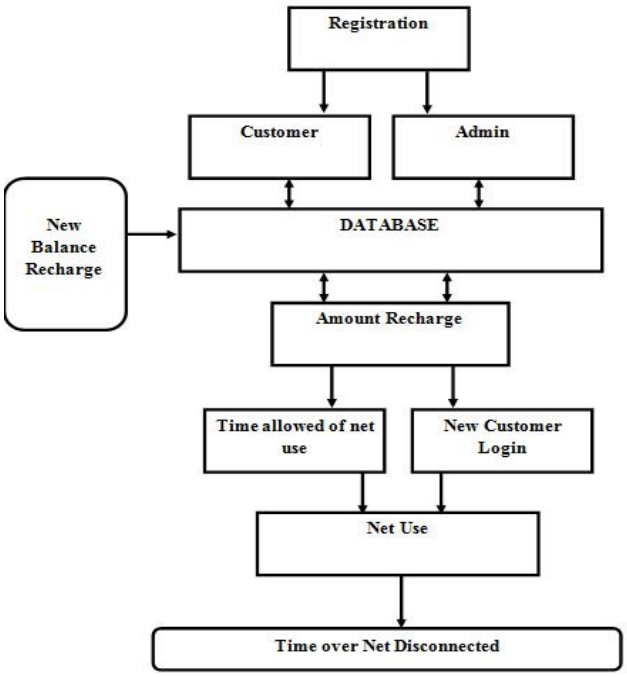

Fig: 1 System Architecture

II. PROPOSED AND EXISTING SYSTEM

A. Objective

1) To create a system with time based net connection facility.
2) To overcome the limitation of every time username password allowance.
3) To create the secure system for correct access and amount addition.

B. Existing System

Data usage based net connection facility with gradual decrease of data and amount.
In already available systems there is system of amount recharge and for the corresponding recharge we receive the data balance. Once the balance over as per the data use net connection gets over.

1) Disadvantages of Existing System

a) Cost as per data rate not as per time.
b) Data rate boundancy, if data balance over in 2 days next 28 days gets wasted from a 30 days plan.
c) Non beneficial for customers and even for the service providers.

2) Proposed System

a) Our work is intended to deal with the combined feature of time based net facility and data reduction demonstration in real time.
b) We propose to create a system which overcomes the limitation of every time username password allowance and to create the secure system for correct access and amount addition.

C. Advantages of Proposed System

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a) Cost as per time not as data rate.
b) Data rate management and best for the users who use net connection in office time and do not work on nights.
c) Beneficial for customers and even for the service providers.

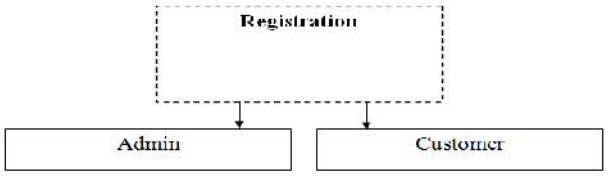
III. WORKING MODULES

Account Creation
1. Customer 2. Admin
Amount Recharge
1. New Recharge 2. Recharge Updation
Net Use Time Issue
Data Disconnection on time over
Database Creation and Updation

IV. MODULES DESCRIPTION

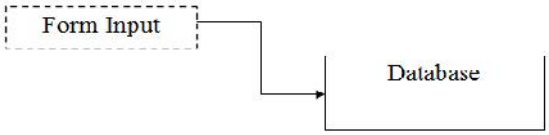
A. *User Registration*

1) We first need to register as the admin or the customer so that we can update recharge amount or do new transaction.
2) The dual login system can be created where all the details should be filled in the GUI form.



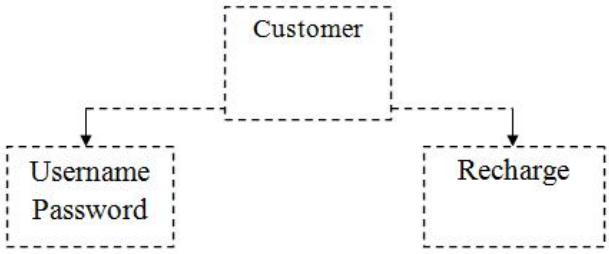
B. *Database*

1) We need to create database in real time so that it can be used by both customer and admin to update and select the desired options and match.
2) The database will be executed using SQL server 2008 and the execution can be done using visual Studio 2010.



C. *New/Old Sale Module*

1) Once we provide the login there comes the customer to recharge the amount.
2) Based on our product sale requirement we select the option.



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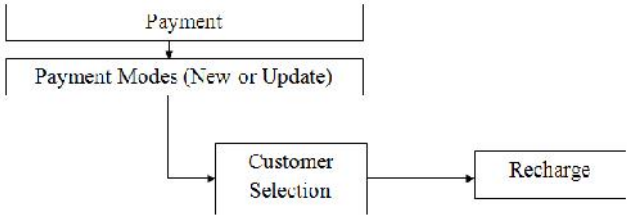
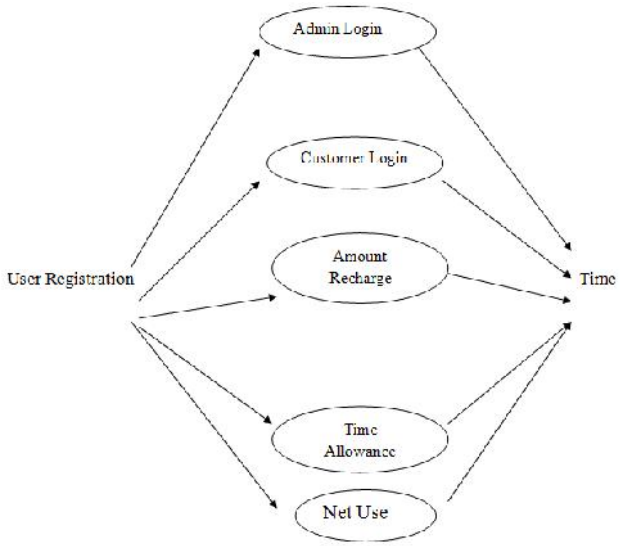
D. Amount Recharge

1) We can either amount to any customer or update existing customer with the amount.

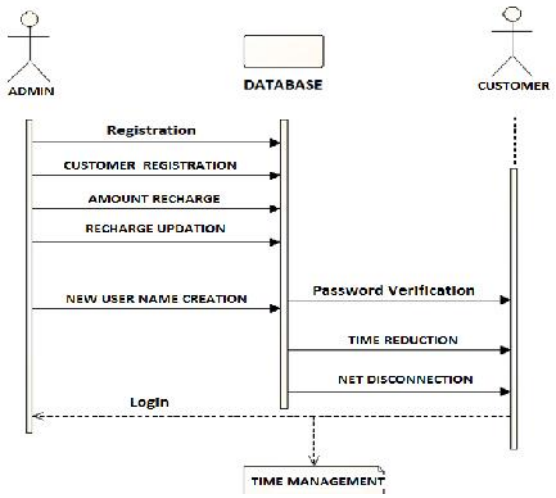
2) The payments can be done in real time and checked for the confirmation.



E. Use Case Diagram



F. Sequence Diagram



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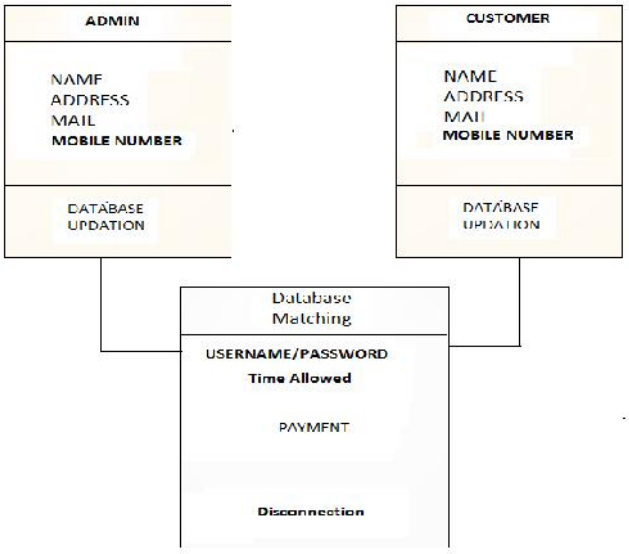
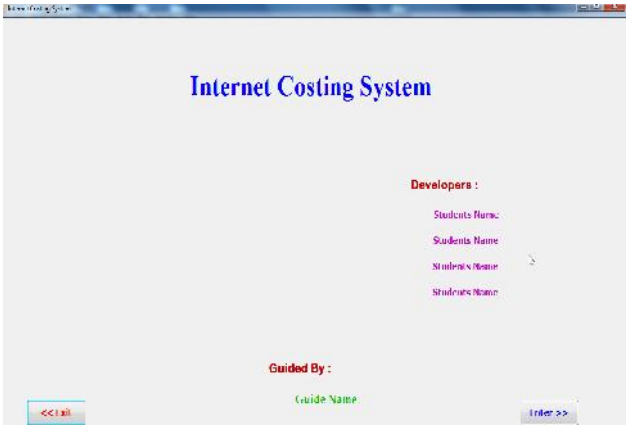
G. Class diagram



V. SIMULATION SCREENSHOTS



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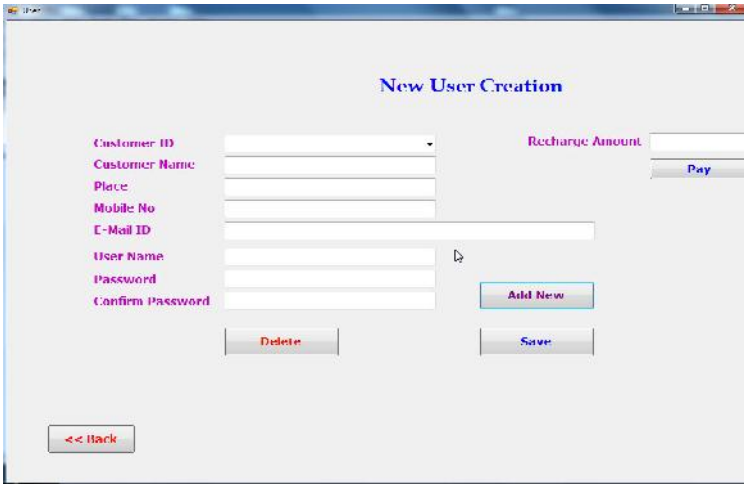

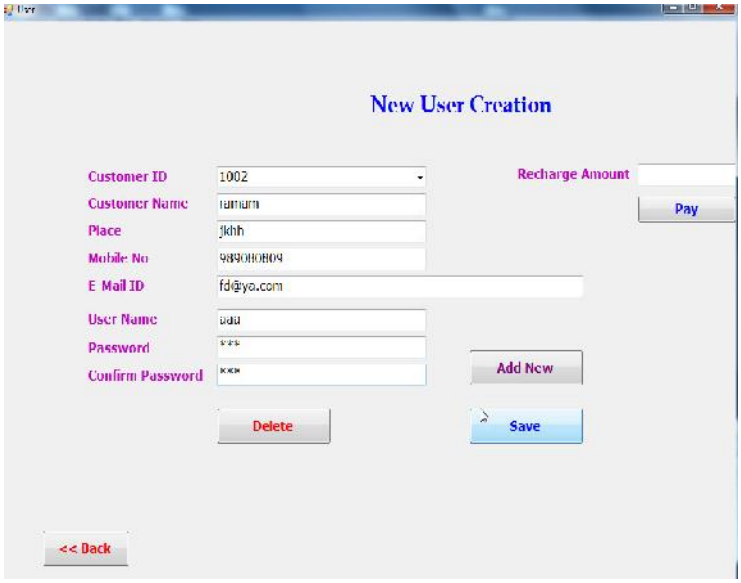

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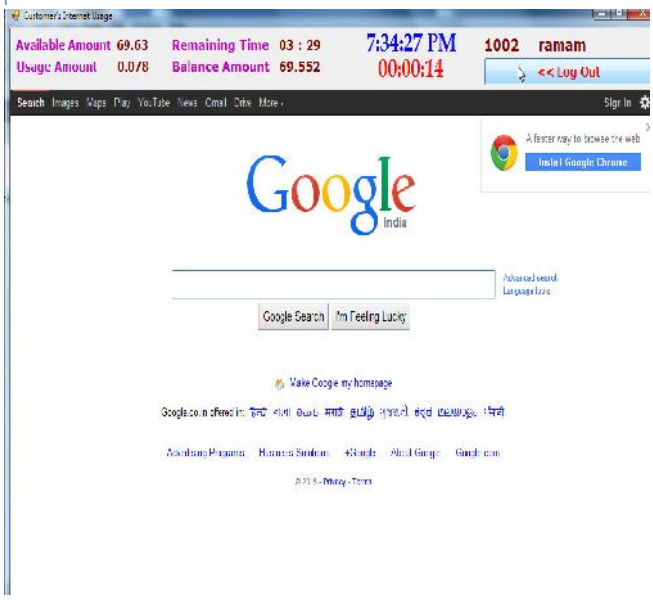

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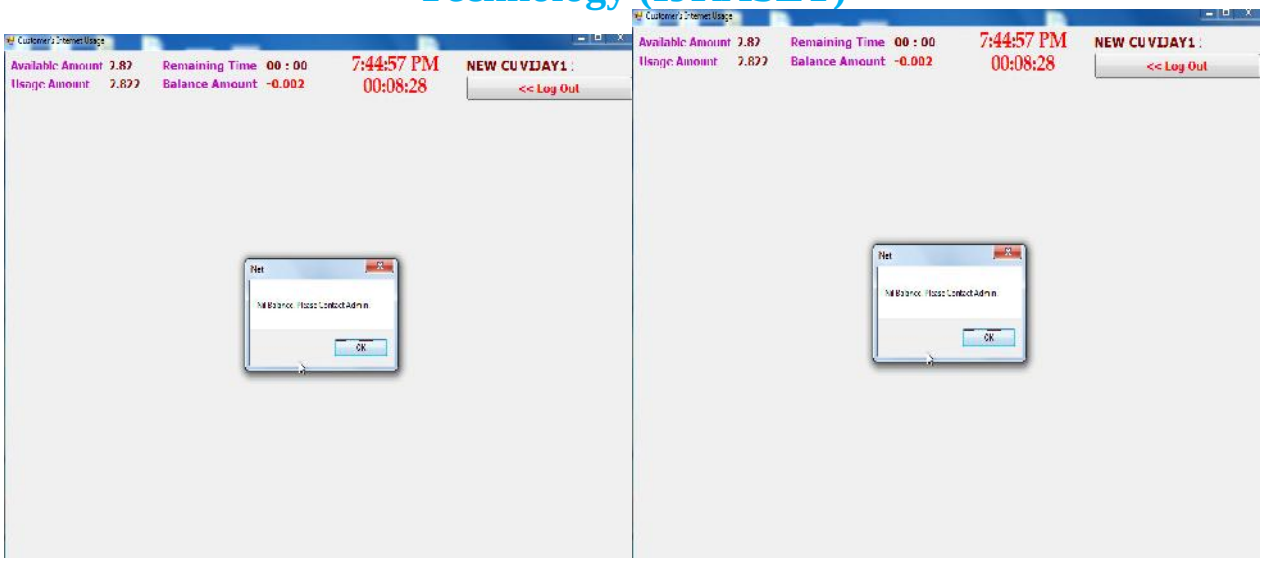

VI. CODING DESIGN

```
<Global.Microsoft.VisualBasic.CompilerServices.DesignerGenerated()> _
Partial Class Customer
    Inherits System.Windows.Forms.Form

    'Form overrides dispose to clean up the component list.
    <System.Diagnostics.DebuggerNonUserCode()> _
    Protected Overrides Sub Dispose(ByVal disposing As Boolean)
        Try
            If disposing AndAlso components IsNot Nothing Then
                components.Dispose()
            End If
        Finally
            MyBase.Dispose(disposing)
        End Try
    End Sub

    'Required by the Windows Form Designer
    Private components As System.ComponentModel.IContainer

    'NOTE: The following procedure is required by the Windows Form Designer
```


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```
'It can be modified using the Windows Form Designer.
'Do not modify it using the code editor.
<System.Diagnostics.DebuggerStepThrough()> _
Private Sub InitializeComponent()
    Me.components = New System.ComponentModel.Container()
    Me.TmrSecs = New System.Windows.Forms.Timer(Me.components)
    Me.Panel1 = New System.Windows.Forms.Panel()
    Me.lblCustomerID = New System.Windows.Forms.Label()
    Me.lblCustomer = New System.Windows.Forms.Label()
    Me.btnLogout = New System.Windows.Forms.Button()
    Me.lblTime = New System.Windows.Forms.Label()
    Me.lblTimeTaken = New System.Windows.Forms.Label()
    Me.lblBalanceAmt = New System.Windows.Forms.Label()
    Me.Label11 = New System.Windows.Forms.Label()
    Me.lblUsageAmt = New System.Windows.Forms.Label()
    Me.Label4 = New System.Windows.Forms.Label()
    Me.lblAmount = New System.Windows.Forms.Label()
    Me.Label2 = New System.Windows.Forms.Label()
    Me.wbIE = New System.Windows.Forms.WebBrowser()
    Me.Panel1.SuspendLayout()
    Me.SuspendLayout()
    '
    'TmrSecs
    '
    Me.TmrSecs.Enabled = True
    Me.TmrSecs.Interval = 1000
    '
    'Panel1
    '
    Me.Panel1.Controls.Add(Me.lblBalanceAmt)
    Me.Panel1.Controls.Add(Me.Label11)
    Me.Panel1.Controls.Add(Me.lblUsageAmt)
    Me.Panel1.Controls.Add(Me.Label4)
```


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```
Me.Panel1.Controls.Add(Me.lblAmount)
Me.Panel1.Controls.Add(Me.Label2)
Me.Panel1.Controls.Add(Me.lblTimeTaken)
Me.Panel1.Controls.Add(Me.lblTime)
Me.Panel1.Controls.Add(Me.btnLogout)
Me.Panel1.Controls.Add(Me.lblCustomer)
Me.Panel1.Controls.Add(Me.lblCustomerID)
Me.Panel1.Dock = System.Windows.Forms.DockStyle.Top
Me.Panel1.Location = New System.Drawing.Point(0, 0)
Me.Panel1.Name = "Panel1"
Me.Panel1.Size = New System.Drawing.Size(1028, 71)
Me.Panel1.TabIndex = 134
'
'lblCustomerID
'
Me.lblCustomerID.AutoSize = True
Me.lblCustomerID.Font = New System.Drawing.Font("Verdana", 14.25!, System.Drawing.FontStyle.Bold, System.Drawing.GraphicsUnit.Point, CType(0, Byte))
Me.lblCustomerID.ForeColor = System.Drawing.Color.Maroon
Me.lblCustomerID.Location = New System.Drawing.Point(749, 7)
Me.lblCustomerID.Name = "lblCustomerID"
Me.lblCustomerID.Size = New System.Drawing.Size(91, 23)
Me.lblCustomerID.TabIndex = 134
Me.lblCustomerID.Text = "Cust ID"
'
'lblCustomer
'
Me.lblCustomer.AutoSize = True
Me.lblCustomer.Font = New System.Drawing.Font("Verdana", 14.25!, System.Drawing.FontStyle.Bold, System.Drawing.GraphicsUnit.Point, CType(0, Byte))
Me.lblCustomer.ForeColor = System.Drawing.Color.Maroon
Me.lblCustomer.Location = New System.Drawing.Point(836, 7)
Me.lblCustomer.Name = "lblCustomer"
```


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```
Me.lblCustomer.Size = New System.Drawing.Size(189, 23)
Me.lblCustomer.TabIndex = 135
Me.lblCustomer.Text = "Customer Name "
'
'btnLogout
'
Me.btnLogout.Font = New System.Drawing.Font("Verdana", 12.0!, System.Drawing.FontStyle.Bold, System.Drawing.GraphicsUnit.Point, CType(0, Byte))
Me.btnLogout.ForeColor = System.Drawing.Color.Red
Me.btnLogout.Location = New System.Drawing.Point(753, 33)
Me.btnLogout.Name = "btnLogout"
Me.btnLogout.Size = New System.Drawing.Size(272, 34)
Me.btnLogout.TabIndex = 136
Me.btnLogout.Text = "<< &Log Out"
Me.btnLogout.UseVisualStyleBackColor = True
'
```

VII. CONCLUSION

Thus I developed the project which is intended to create a time based scheduling system for net use. The time based scheduling allows the customer to use net services for the purchased time with great speed. The same user can use the net for the duration he purchases. It is equally useful to the service provider as they don't need to provide any slow net connection even when the customer's data plan is over.

VIII. ACKNOWLEDGMENTS

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REFERENCES

[1] R. Agrawal, J. Kiernan, R. Srikant, and Y. Xu, "Order Preserving Encryption for Numeric Data," Proc. ACM SIGMOD Int'l Conf. Management of Data (SIGMOD), 2004.
[2] M. Armbrust, A. Fox, R. Griffith, A.D. Joseph, R.K. Andy Konwinski, G. Lee, D. Patterson, A. Rabkin, I. Stoica, and M. Zaharia, "Above the Clouds: A Berkeley View of Cloud Computing," technical report, Univ. of Berkerley, 2009.
[3] J. Bau and J.C. Mitchell, "Security Modeling and Analysis," IEEE Security and Privacy, vol. 9, no. 3, pp. 18-25, May/June 2011.
[4] S. Boyd and L. Vandenberghe, Convex Optimization. Cambridge Univ. Press, 2004.
[5] N. Cao, C. Wang, M. Li, K. Ren, and W. Lou, "Privacy-Preserving Multi-Keyword Ranked Search over Encrypted Cloud Data," Proc. IEEE INFOCOMM, 2011.
[6] K. Chen, R. Kavuluru, and S. Guo, "RASP: Efficient Multidimensional Range Query on Attack-Resilient Encrypted Databases,"
Proc. ACM Conf. Data and Application Security and Privacy, pp. 249-260, 2011.
[7] K. Chen and L. Liu, "Geometric Data Perturbation for Outsourced Data Mining," Knowledge and Information Systems, vol. 29, pp. 657-695, 2011.
[8] K. Chen, L. Liu, and G. Sun, "Towards Attack-Resilient Geometric Data Perturbation," Proc. SIAM Int'l Conf. Data Mining, 2007.
[9] B. Chor, E. Kushilevitz, O. Goldreich, and M. Sudan, "Private Information Retrieval," ACM Computer Survey, vol. 45, no. 6, pp. 965-981, 1998.

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[10] R. Curtmola, J. Garay, S. Kamara, and R. Ostrovsky, "Searchable Symmetric Encryption: Improved Definitions and Efficient Constructions," Proc. 13th ACM Conf. Computer and Comm. Security, pp. 79-88, 2006.
[11] N.R. Draper and H. Smith, Applied Regression Analysis. Wiley,1998.
[12] H. Hacigumus, B. Iyer, C. Li, and S. Mehrotra, "Executing SQL over Encrypted Data in the Database-Service-Provider Model," Proc. ACM SIGMOD Int'l Conf. Management of Data (SIGMOD), 2002.
[13] T. Hastie, R. Tibshirani, and J. Friedman, The Elements of Statistical Learning. Springer-Verlag, 2001.
[14] B. Hore, S. Mehrotra, and G. Tsudik, "A Privacy-Preserving Index for Range Queries," Proc. Very Large Databases Conf. (VLDB), 2004.
[15] Z. Huang, W. Du, and B. Chen, "Deriving Private Information from Randomized Data," Proc. ACM SIGMOD Int'l Conf. Management of Data (SIGMOD), 2005.
[16] A. Hyvarinen, J. Karhunen, and E. Oja, Independent Component Analysis. Wiley, 2001.
[17] I.T. Jolliffe, Principal Component Analysis. Springer, 1986.
[18] F. Li, M. Hadjieleftheriou, G. Kollios, and L. Reyzin, "Dynamic Authenticated Index Structures for Outsourced Databases," Proc. ACM SIGMOD Int'l Conf. Management of Data (SIGMOD), 2006.
[19] K. Liu, C. Giannella, and H. Kargupta, "An Attacker's View of Distance Preserving Maps for Privacy Preserving Data Mining,"Proc. 10th European Conf. Principle and Practice of Knowledge Discovery in Databases (PKDD), 2006.
[20] M.L. Liu, G. Ghinita, C.S. Jensen, and P. Kalnis, "Enabling Search Services on Outsourced Private Spatial Data," The Int'l J. Very Large Data Base, vol. 19, no. 3, pp. 363-384, 2010.

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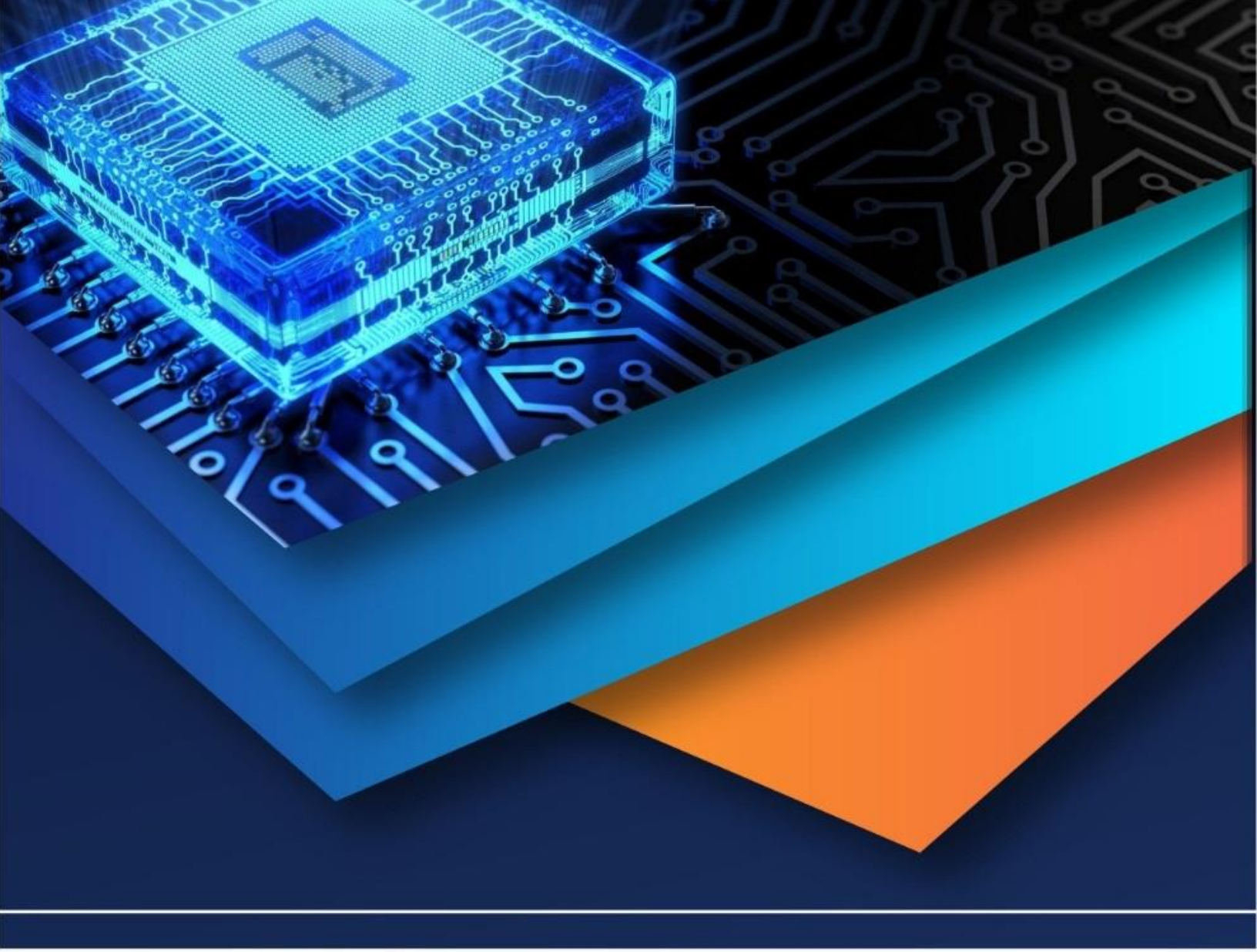

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