

FORMAT FOR COMPLETION REPORT

PART - 1

1. Title of the project : **DDoS Attack Detection Using Ensemble Approach**
2. Implementing Organisation : **Tezpur University**
3. DIT Sanction No. and Date : 12(11)/2011-ESD dated 30.12.2011
- 4 (a) Total Budget Outlay : 56.00 lakh
- (b) Duration of project : 2 years
- (c) Date of completion and reasons for delay, if any : 30-04-2014
(extended approximately 3 and half more months to fulfill some additional objectives.)
5. Total funds spent under various approved : Rs. 52,32,883.00
budgetary Heads/actual expenditure. Reasons (Please see Table 1)
for deviation, if any (as per enclosed Table 1)
6. Details of equipment/assets acquired out of : (Please see Table 2 and 2A)
DIT funds with the name of equipment,
sources of supply, total cost/whether Indian
or imported.
7. Details of manpower associated with the : (Please see Table 3)
project
8. Details of year-wise audited statement of : Enclosed
accounts and utilization certificates submitted
to DIT (as per G.F.R.19 & 19A)

**TABLE : 1 HEADWISE BREAK-UP OF EXPENDITURE
(Rs. In Lakhs)**

Sl. No	Head	Approved Budget Outlay (Rs.)	Expenditure 2013-2014 (Rs.)	Expenditure 2014-2015 (Upto 30/05/14) (Rs.)	Total expenditure (upto 30-05-14) (Rs.)
1	Capital Equipment	28,84,000	4,12,020	14,500	4,26,520
2	Consumable Items / components	1,25,000	37,479	Nil	37,479
3	Manpower	9,12,000	4,44,000	36,000	4,80,000
4	Travel/Training	3,00,000	19,920	1,10,018	1,29,938
5	Contingencies	4,50,000	2,88,386	40,000	3,28,386
6	Overheads	9,29,000	96,875	13,000	1,09,875
Total in Rs.		56,00,000	12,98,680	2,13,518	15,12,198
Expenditure in 2012-2013 Rs. 37,20,685.00					
Total Expenditure= 37,20,685+12,98,680+2,13,518=52,32,883					
Total Balance Rs.=56,00,000.00-52,32,883.00= Rs. 3,67,117.00					

* Please indicate deviation from originally approved budget and whether necessary approval has been taken.

- Upto the end of last Financial Year
- From the beginning of current Financial Year till date
- For remaining period of current Financial Year
- Total of (a)+(b)+(c)

TABLE 2 : CAPITAL EQUIPMENT PROCURED FOR THE PROJECT

(Rs. In Lakhs)

S.No	Description	Manufacturer/ Supplier	Brief Specifications	Purchase Order No. & date	Date of Receipt	Total Cost	Duty Paid, if any	Conditions G- Good B - Bad #
------	-------------	------------------------	----------------------	---------------------------	-----------------	------------	-------------------	---------------------------------------

1.	Desktop PC	BMG Informatics Pvt. Ltd., Ghy	HP 7000 series, i3 core, 2GB RAM, 320GB HDD, Windows 7 preloaded	14/02/12	12/06/12	10,45,989		G
2.	Workstation	BMG Informatics Pvt. Ltd., Ghy	HP/Z800 2 x Intel Xeon Quad Core E5520 Processor @3.33 GHz, 12 GB RAM ECC DDR3 1333MHz FSB	4/05/12	30/06/12	5,14,500		G
3	Projector	BMG Informatics Pvt. Ltd., Ghy	Sony LCD Project VPL-EX 145	14/02/12	12/06/12	62,500		G
4	Rack Server	BMG Informatics Pvt. Ltd., Ghy	IBM Model- X3550 M3	14/02/12	12/06/12	3,14,000		G
5	Red Hat Enterprise Linux Server 6.0 Standard	BMG Informatics Pvt. Ltd., Ghy		05/07/12	16/11/12	38,605		G
6	10KVA UPS	BMG Informatics Pvt. Ltd., Ghy	ORION-ASTER SERIES	23/11/12	5.12.12	1,57,198		G
7	Cisco Router	BMG Informatics Pvt. Ltd., Ghy	2 Integrated 10/100/1000 Ethernet Port	28/11/12	22/01/2013	1,28,100		G
8	Cisco Switch	BMG Informatics Pvt. Ltd., Ghy	24 port L3 Switch	28/11/12	22/01/2013	3,53,622		G
9	Tablet PC	Beatrix Systems &	HP Envy-X2	15/6/13	28/6/13	79,5900		

10	Wall Mount LCD	Services BMG Informatics Pvt. Ltd., Ghy	SAMSUNG BX-40" LCD	28/11/12	22/01/2013	25,725		G
11	Samsung Galaxy Android Smart Phone	Data Comuter, AC Plaza NB Road, Tezpur	Android Smart Phone	10/04/2014	29/04/2014	14500.00		G

Mention condition of equipment purchased. If bad, describe the fault/defect and what action has been taken to repair it?

**TABLE 2.A SALE/TRANSFER OF CAPITAL GOODS
(WITH PRIOR PERMISSION OF DIT)**

S.No	Description	Sale/Transfer S/T	Orgn. To which sold/ Transferred	Sale Value Rs. in lakhs	Funds Refunded To DIT
1.					

TABLE 3 : MANPOWER ASSOCIATED WITH THE PROJECT :

Sl.	Name	Design.	Qualfn	% of time devoted	Salary From Project (Y/N)	Date of Leaving	Total Average Emoluments (Monthly)
1.	Prof. D.K. Bhattacharyya	Professor	Ph. D.	50%	No	- -	-NA-
2.	Dr. N. Sarma	Associate Professor	Ph. D.	20%	No	-	-NA-
3.	Ram Charan Baishya	SRF	M.Tech	100%	Yes	-	18,000/-
4.	Nazrul	SRF	M.Tech	100%	Yes	-	18,000/-

	Hoque						
--	-------	--	--	--	--	--	--

* Please indicate as applicable

- (a) Institute Faculty and Staff : 02
- (b) Staff recruited for the project : 02
- (c) Students : 9 M.Tech, 6 B.Tech students for their dissertation works

FORM G.F.R. 19

**(SEE GOVERNMENT OF INDIA'S DECISION 7(B) UNDER RULE 148(3)
Assets Acquired wholly or substantially out of Government Grants
Register maintained by grantee institution**

**Block Account maintained by Sanctioning Authorities
Name of the Authority: Tezpur University**

1.	Name of Grantee Institution	Tezpur University
2.	Name & Date of sanction	12(11)/2011-ESD dated 30.12.2011
3.	Amount of the sanctioned grant	56.00 lakh
4.	Brief purpose of the grant	To study DDoS attack, its type and characteristics and to develop testbed for various types of DDoS attack generation, their mounting, capturing and preprocessing <ul style="list-style-type: none"> • Development of supervised and unsupervised methods for detection of DDoS attacks • Development of an ensemble approach for effective detection of both low-rate and high rate DDoS attack with minimum false alarm.
5.	Whether any condition regarding the right of ownership of Govt. in the property or other assets acquired out of the grant was incorporated in the grant-in-aid sanction	No
6.	Particulars of assets actually credited or acquired	2 workstations 2 Servers 30 Nodes 2 L3 Switches

		1 router
7.	Value of the assets as on	
8.	Purpose for which utilized at present	<ul style="list-style-type: none"> • Research and development • To support teaching the course 'Data Mining in Security'
9.	Encumbered or not	Not Encumbered
10.	Reasons if encumbered	Not Applicable
11.	Disposed of or not	Not Disposed
12.	Reasons & authority, if any for disposal	Not Applicable
13.	Amount realised on disposal	Not Applicable
14.	Remarks	Nil

PART – II

1. Project work and achievements :

a. Executive Summary :

b. Details covering targets, achievements in quantitative term and reasons for variations, if any on the following:

i. Scope of the project

- To develop a testbed to launch, monitor and defend DDoS attack
- To develop a supervised and an unsupervised method for DDoS attack detection
- To study and develop an ensemble approach with high detection accuracy

ii. Systems/ Sub-systems with specifications or feasibility report on futuristic studies

- Attack launching


 D.K. Bhattacharya

- Traffic capturing and attribute/feature selection using static or incremental approaches
- Supervised defense system
- Unsupervised defense system
- Ensemble based defense system

iii. Research papers/Technical Reports brought out

Published Books:

- a. Network Anomaly Detection from Machine Learning Perspective, co-author: Prof. Jugal K Kalita of UCCS, USA Published by: CRC Press, Taylor and Francis Group; Total pages: 366; Published in July, 2013, ISBN: 978-1-4665-8208-8
- b. Network and Information Security, edited volume, published by Narosa Pvt. Ltd, New Delhi; ISBN 978-81-8487-314-6, 2013, India.

Working:

- c. DDoS Attack: Evolution, Detection, Prevention, Reaction and Tolerance, co-authored by Prof. Jugal K Kalita of UCCS, USA, (Three chapters completed)

Published Journal articles

- (a) M H Bhuyan, D K Bhattacharyya and J K Kalita, Network Anomaly Detection: Methods, Systems and Tools, in the IEEE Communications Surveys and Tutorials, DOI: 10.1109/SURV.2013.052213.00046, 2013
- (b) N Hoque, R C Baishya, M H Bhuyan, D K Bhattacharyya and J K Kalita, A Survey of Network Security Tools and Systems, in the Journal of Networks and Computer Applications (JNCA), Elsevier, 2013
- (c) M H Bhuyan, D K Bhattacharyya and J K Kalita, Towards an unsupervised method for network anomaly detection in large datasets, in Journal of Computing and Informatics, vol 33, no 1, (SCI), 2013
- (d) P Gogoi, B Borah and D K Bhattacharyya, MLH-IDS: Multi-level Hybrid Intrusion Detection Method, in The Computer, journal, Oxford University Press, DOI: 10.1093/comjnl/bxt044, 2013
- (e) M H Bhuyan, H J Kashyap, D K Bhattacharyya and J K Kalita, Distributed Denial of Service Attack Detection : Methods, Tools and Future Directions, in The Computer journal, DOI: 10.1093/comjnl/bxt031, 2013.
- (f) P Gogoi, B Borah, D K Bhattacharyya and J K Kalita, Roughset Based Effective Rule Generation Method for Classification with an Application in Intrusion Detection, in the Int'nl Journal of Security and Network , Inderscience, vol 8, no 2, 2013
- (g) N Hoque, D K Bhattacharyya and J K Kalita, MIFS-ND: A Mutual Information-based Feature Selection Method, Expert Systems with Applications, Elsevier, 2014.
- (h) P Gogoi, B Borah and D K Bhattacharyya, Network Anomaly Identification using Supervised Classifier, in Informatica , vol 37, pages 93-105, 2013

Communicated Journal articles:

- (a) M H Bhuyan, D K Bhattacharyya and J K Kalita, DDoS Flooding Attacks Detection and IP Traceback Using Extended Entropy Metric submitted to IEEE Transaction on Parallel and Distributed Systems.
- (b) M H Bhuyan, D K Bhattacharyya and J K Kalita, Towards a systematic approach to generate real life dataset for intrusion detection communicated to Journal of Computer Standards and Interfaces, Elsevier
- (c) M H Bhuyan, D K Bhattacharyya and J K Kalita, Statistical Techniques for Detection of DDoS Flooding Attacks: An Empirical Study, into the Journal of Pattern Recognition Letters, Elsevier, (Under 1st Review)
- (d) R C Baishya and D K Bhattacharyya, DDoS Attack Detection Using Unique Source IP Deviation submitted to IEEE Transactions on Dependable and Secure Computing
- (e) N Hoque, D K Bhattacharyya and J K Kalita, Botnet Attacks: Trends and Challenges, in the IEEE Communications Surveys and Tutorials.(Under 1st review)
- (f) M H Bhuyan, D K Bhattacharyya and J K Kalita, An Efficient Outlier based Technique for analysis of High dimensional and Large Network Traffic datasets , in the Journal of Networks and Computer Applications, Elsevier, (under 2nd review), 2013

Published Conference Articles

- (a) M H Bhuyan, D K Bhattacharyya and J K Kalita, An Effective Unsupervised Network Anomaly detection Method, in the ACM Proc of ICACCI 2012, pp 533-539, Chennai **(Selected for Best Paper Award)**
- (b) H Kashyap and D K Bhattacharyya, A DDoS Attack Detection Mechanism Based on Protocol Specific Traffic Features, in the ACM Proc of CCSEIT 2012, pp 194-200, Coimbatore, India
- (c) D Boro, B Nongpoh and D K Bhattacharyya, Anomaly based intrusion detection using meta ensemble classifier, in the ACM Proc of SIN'12, October 25-27, 2012, Jaipur, India
- (d) Bhaskar Jyoti Chutia, Debojit Boro and Dhruva K. Bhattacharyya, Optimal Feature Subset Selection using a Multi-level Hybrid Model, Proc. of Int. Conf. on Advances in Communication, Network, and Computing, CNC, Elsevier, 2014

iv. Manpower trained

- 02 students received PhD degree
- 02 PhD students working
- 09 M.Tech students
- 06 B.Tech students

v. Anticipated know-how transfer to industry: *Not yet explored*

- vi. Technology/Know-how developed (Hardware, software & other details, if any); know-how document available or not

- *Developed a robust tool (S/W) called TU-CANNON to*
 1. *launch all types of DDoS attack traffic*
 2. *monitor attack traffic*
 - *Developed a defense mechanism to detect all types of DDoS attack based on the concept of VSC (Violation Source IP Count)*
 - *Developed feature selection method to select optimal subset of features for network intrusion data as well as speech recognition, text categorization, and gene expression data.*
 - *Developed a dynamic (or incremental) feature selection method for classification of high dimensional data*
 - *Developed two information metric based (EEM & E²M) s/w method to detect both low-rate and high-rate DDoS attack detection with high detection accuracy*
- vii. No. of industries shown interest for know-how utilization/
commercialization:
Not known
- viii. No. of users/interested for taking prototype/finished product:
Academic users are interested for our tool TU-CANNON
- ix. No. of industries/users interested in applying the know-how developed for
enhanced productivity:
Not known

2. Additional information

i) Details of patents registered, if any : *No*

ii) Technological spin offs, seeding of a major activity and how the project has helped in enhancing the technological base/capabilities in the country :

iii) Future areas for work :
Application layer attack generation using own Testbed and to provide solutions for

- *HTTP flooding attack*
- *XSS attack*
- *SQL Injection*


(Chandran K. P. Shrivastava)

Form GFR 19-A

Form of Utilization Certificate

<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011- ESD, Dated 30- 12-2011	46.65 Lakhs
	Approv. No. 12(11)/2011- ESD, Dated 16- 12-2013	9.35 Lakhs
	Total	56.00 Lakhs

Certified that Nil received during the year **2014-2015** in favour of **Dept of Computer Science & Engineering, Tezpur University** under this Ministry/Department Letter No. given in the margin and **Rs. 5,80,635.00** on account of unspent balance of the previous year, a sum of **Rs. 2,13,518.00** has been utilised for the purpose of for which it was sanctioned and that the balance of **Rs. 3,67,117.00** remaining unutilised at the end of the year has been surrendered to Government (vide No. _____ dated _____) /will be adjusted towards the grants-in-aid payable during the next year ____.

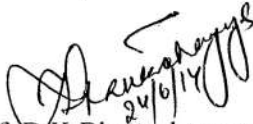
2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was

sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account


Prof. D K Bhattacharyya
Principal Investigator


Registrar
Tezpur University
Registrar
Tezpur University


Finance Officer
Tezpur University
Finance Officer
Tezpur University

Form GFR 19-A

Form of Utilization Certificate

<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011- ESD, Dated 30- 12-2011	46.65 Lakhs
	Approv. No. 12(11)/2011- ESD, Dated 16- 12-2013	9.35 Lakhs
	Total	56.00 Lakhs


Certified that out of **Rs. 9.35** lakhs of Grants-in-aid sanctioned during the year **2013-2014** in favour of **Dept of Computer Science & Engineering, Tezpur University** under this Ministry/Department Letter No. given in the margin and **Rs. 9,44,315.00** on account of unspent balance of the previous year, a sum of **Rs. 12,98,680.00** has been utilised for the purpose of for which it was sanctioned and that the balance of **Rs. 5,80,635.00** remaining unutilised at the end of the year has been surrendered to Government (vide No. _____ dated _____) /will be adjusted towards the grants-in-aid payable during the next year **2014-2015**.

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account



Prof. D K Bhattacharyya
Principal Investigator


Registrar
Tezpur University
Registrar
Tezpur University


Finance Officer
Tezpur University
Finance Officer
Tezpur University

TABLE: I- HEADWISE BREAK-UP OF EXPENDITURE

Sl. No	Head	Approved Budget Outlay (Rs.)	Expenditure 2013-2014 (Rs.)	Expenditure 2014-2015 (Upto 30/05/14) (Rs.)	Total expenditure (upto 30-05-14) (Rs.)
1	Capital Equipment	28,84,000	4,12,020	14,500	4,26,520
2	Consumable Items / components	1,25,000	37,479	Nil	37,479
3	Manpower	9,12,000	4,44,000	36,000	4,80,000
4	Travel/Training	3,00,000	19,920	1,10,018	1,29,938
5	Contingencies	4,50,000	2,88,386	40,000	3,28,386
6	Overheads	9,29,000	96,875	13,000	1,09,875
Total in Rs.		56,00,000	12,98,680	2,13,518	15,12,198
Expenditure in 2012-2013 Rs. 37,20,685.00					
Total Expenditure= 37,20,685+12,98,680+2,13,518=52,32,883					
Total Balance Rs.=56,00,000.00-52,32,883.00= Rs. 3,67,117.00					


 Prof. D K Bhattacharyya
 Principal Investigator


 Registrar
 Tezpur University
Registrar
 Tezpur University


 Finance Officer
 Tezpur University
Finance Officer
Tezpur University

Form GFR 19-A

Form of Utilization Certificate

<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs
	Total	46.65 Lakhs


Certified that Nil received during the year 2013-14 in favour of Dept of Computer Science & Engineering, Tezpur University, sanctioned to Registrar, Tezpur University, under the Ministry/Department Letter No. given in the margin, Rs. 9,44,315.00 on account of unspent balance of the previous year and Rs. Nil on account of interest earned on the grant released, a sum of Rs. 9,46,008.00 has been utilized (upto 12th September 2013 for the purpose for which it was sanctioned and that the of Rs. -1693.00 remaining unutilized at the end of the year has been surrendered to government (vide No. _____ X dated _____ X) /will be adjusted towards the grant-in-payable during the current session 2013-2014.

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.


1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account


Prof. D K Bhattacharyya
Principal Investigator

PROFESSOR
Dept. of Computer Science & Engg.


Registrar
Tezpur University
Tezpur University


OSD Finance
Tezpur University
Tezpur University


Statement of Expenditure
DIT Funded Project

	Head	Approved Budget Outlay (Rs.)	Expenditure from 2012-2013 (1/4/12 to 31/03/13) ✓	Expenditure from 2013-2014 (upto 12/09/13) (Rs.)
1	Capital Equipment	28,84,000	24,57,316	4,12,020
2	Consumable Items	75,000	Nil	37,479
3	Manpower	4,32,000	3,00,446	2,28,000
4	Travel/Training	1,50,000	77,984	19,920
5	Contingencies	3,50,000	1,07,771	2,48,589
6	Overheads	7,74,000	7,77,168	Nil
	Total	46,65,000	37,20,685	9,46,008

Unspent balance of the previous year : Rs. 9,44,315.00

Total amount spent : Rs. 9,46,008.00

Excess amount spent :Rs. – 1,693.00


 Prof. D K Bhattacharyya
 Principal Investigator
Professor
 Department of Chemistry & Engg.


 OSD Finance
 Tezpur University
 Tezpur, Assam

Form GFR 19-A

Form of Utilization Certificate

<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs
	Total	46.65 Lakhs


Certified that Nil received during the year 2013-14 in favour of Dept of Computer Science & Engineering, Tezpur University, sanctioned to Registrar, Tezpur University, under the Ministry/Department Letter No. given in the margin, Rs. 9,44,315.00 on account of unspent balance of the previous year and Rs. Nil on account of interest earned on the grant released, a sum of Rs. 946000.00 has been utilized (upto 12th September 2013 for the purpose for which it was sanctioned and that the of Rs. -1693.00 remaining unutilized at the end of the year has been surrendered to government (vide No. _____X_____ dated _____X_____) /will be adjusted towards the grant-in-payable during the current session 2013-2014.

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account


Prof. D K Bhattacharyya
Principal Investigator
Professor
Dept. In-charge of Computer Science & Engg.


Registrar
Tezpur University
Registrar
Tezpur University


OSD Finance
Tezpur University
OSD Finance
Tezpur University


Statement of Expenditure
DIT Funded Project

	Head	Approved Budget Outlay (Rs.)	Expenditure from 2012-2013 (1/4/12 to 31/03/13)	Expenditure from 2013-2014 (upto 12/09/13) (Rs.)
1	Capital Equipment	28,84,000	24,57,316	4,12,020
2	Consumable Items	75,000	Nil	37,479
3	Manpower	4,32,000	3,00,446	2,28,000
4	Travel/Training	1,50,000	77,984	19,920
5	Contingencies	3,50,000	1,07,771	2,48,589
6	Overheads	7,74,000	7,77,168	Nil
	Total	46,65,000	37,20,685	9,46,008

Unspent balance of the previous year : Rs. 9,44,315.00

Total amount spent : Rs. 9,46,008.00

Excess amount spent :Rs. – 1,693.00


12/9/13
Prof. D K Bhattacharyya
Principal Investigator
PROFESSOR
Department of Computer Science & Engg.


13/9/13
OSD Finance
Tezpur University
OSD Finance
Tezpur University

Form GFR 19-A

Form of Utilization Certificate


<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs
	Total	46.65 Lakhs

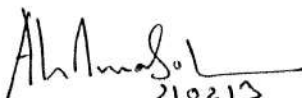
Certified that out of **Rs. 46,65,000.00** of Grants-in-aid sanctioned during the year 2011-12 in favour of **Dept of Computer Science & Engineering Tezpur University**, sanctioned to **Registrar, Tezpur University** under this Ministry/Department Letter No. given in the margin, **Rs. 46,65,000.00** on account of unspent balance of the previous year and Rs. **Nil** on account of interest earned on the grant released, a sum of **Rs. 34,53,787.00** has been utilised for the purpose of for which it was sanctioned and that the balance of **Rs. 12,11,213.00** remaining unutilised at the end of the year has been surrendered to **Government** (vide No. X dated X) /will be adjusted towards the grants-in-aid payable during the next year 2012-13.

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry


Prof. D.K. Bhattacharyya
Principal Investigator
Professor
Department of Computer Science & Engg.
Tezpur University


Prof. A K Buragohain
Registrar, TU
Tezpur University


OSD Finance
Tezpur University

Form GFR 19-A

Form of Utilization Certificate


<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs
	Total	46.65 Lakhs

Certified that out of **Rs. 46,65,000.00** of Grants-in-aid sanctioned during the year 2011-12 in favour of **Dept of Computer Science & Engineering Tezpur University**, sanctioned to **Registrar, Tezpur University** under this Ministry/Department Letter No. given in the margin, **Rs. 46,65,000.00** on account of unspent balance of the previous year and Rs. **Nil** on account of interest earned on the grant released, a sum of **Rs. 34,53,787.00** has been utilised for the purpose of for which it was sanctioned and that the balance of **Rs. 12,11,213.00** remaining unutilised at the end of the year has been surrendered to **Government** (vide No. X dated X) /will be adjusted towards the grants-in-aid payable during the next year 2012-13.

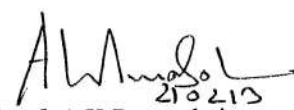
2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry


Prof. D K Bhattacharyya
Principal Investigator

Professor
Department of Computer Science & Engg.
Tezpur University


Prof. A K Buragohain
Registrar, TU
Tezpur University


OSD Finance
Tezpur University

Form GFR 19-A

Form of Utilization Certificate

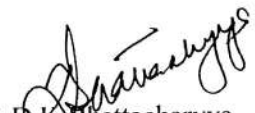
<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>	
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs	Certified that Nil received during the year 2013-14 in favour of Dept of Computer Science & Engineering, Tezpur University, sanctioned to Registrar, Tezpur University, under the Ministry/ Department Letter No. given in the margin, Rs. 9,44,315.00 on account of unspent balance of the previous year and Rs. Nil on account of interest earned on the grant released, a sum of Rs. 2,86,549.00 has been utilized (upto 15 th July 2013) for the purpose for which it was sanctioned and that the balance of Rs. 6,57,766.00 remaining unutilized at the end of the year has been surrendered to government (vide No. _____ X _____ dated _____ X _____) /will be adjusted towards the grant-in-payable during the current session 2013-2014.
	Total	46.65 Lakhs	

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account



Prof. D.K. Bhattacharyya
Principal Investigator
Professor
Department of Computer Science & Engg.


Registrar
Tezpur University
Registrar
Tezpur University

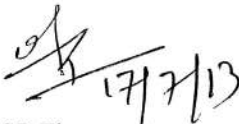

OSD Finance
Tezpur University

Statement of Expenditure
DIT Funded Project

	Head	Approved Budget Outlay (Rs.)	Expenditure from 2012-2013 (1/4/12 to 31/03/13)	Expenditure from 2013-2014 (upto 15/07/13) (Rs.)
1	Capital Equipment	28,84,000	24,57,316	3,61,725 (committed)
2	Consumable Items	75,000	Nil	66,800 (committed)
3	Manpower	4,32,000	3,00,446	1,20,000
4	Travel/Training	1,50,000	77,984	Nil
5	Contingencies	3,50,000	1,07,771	1,66,549
6	Overheads	7,74,000	7,77,168	Nil
	Total	46,65,000	37,20,685	7,15,074


Prof. D K Bhattacharyya
Principal Investigator

professor
Science & Engg.


OSD Finance
Tezpur University

OSD Finance
Tezpur University

Form GFR 19-A

Form of Utilization Certificate


<u>Sl. No.</u>	<u>Letter No. & Date</u>	<u>Amount Rs.</u>	Certified that Nil received during the year 2012-13 in favour of Dept of Computer Science & Engineering, Tezpur University, sanctioned to Registrar, Tezpur University, under the Ministry/ Department Letter No. given in the margin, Rs. Rs. 46,65,000.00 on account of unspent balance of the previous year and Rs. Nil* on account of interest earned on the grant released, a sum of Rs. 37,20,685.00 has been utilized for the purpose for which it was sanctioned and that the balance of Rs. 9,44,315.00 remaining unutilized at the end of the year has been surrendered to government (vide No. ___ X ___ dated ___ X ___) /will be adjusted towards the grant-in-payable during the next session 2013-2014.
1	Approv. No. 12(11)/2011-ESD, Dated 30-12-2011	46.65 Lakhs	
	Total	46.65 Lakhs	

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/ are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

1. Ledger Book
2. Cash Book
3. Purchase orders
4. Stock Book entry

* All project sanctioned money are maintained in current account


Prof. D K Bhattacharyya
Principal Investigator

professor


Registrar
Tezpur University
Registrar
Tezpur University


OSD Finance
Tezpur University
OSD Finance
Tezpur University