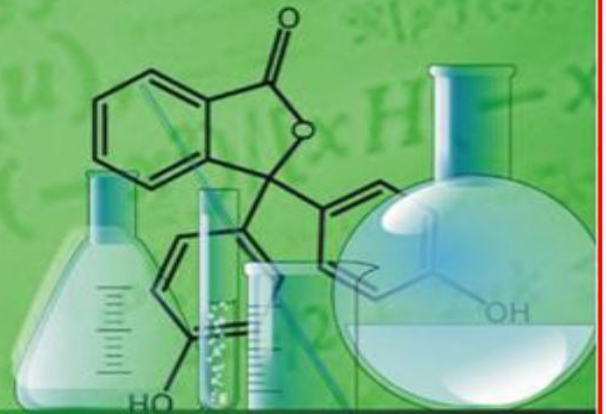
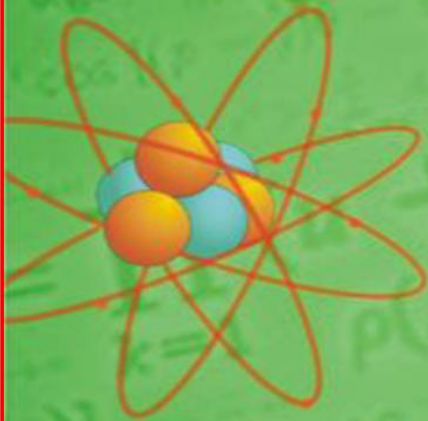


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	<b>Authors:</b>	<b>Mariya Negreva, Krasimira Prodanova, Katerina Vitlianova, Albena Alexandrova</b>	
	<b>Paper Title:</b>	<b>Prognostic Capacity of Oxidative Biomarkers in Paroxysmal Atrial Fibrillation</b>	
	<p><b>Abstract:</b> Background: In our previous studies on the oxidative status of patients with paroxysmal atrial fibrillation (PAF) we found eight oxidative biomarkers - plasma malondialdehyde (PI-MDA), erythrocyte malondialdehyde (Er-MDA), plasma glutathione (PI-GSH), erythrocyte glutathione (Er-GSH), superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GSH-Px) and glucose-6-phosphate dehydrogenase (Glu-6-PhD) - that changed significantly still in the first twenty-four hours of the arrhythmia clinical presentation. It is exactly their early changes that suggest a correlation of these biomarkers with the trigger mechanisms of the rhythm disorder which then raise the question of how efficiently they can predict PAF occurrence. Aim: To analyse the changes in these oxidative biomarkers as predictive for PAF development. Place and duration of study: The participants were recruited in 1st Cardiology Clinic of St Marina University Hospital, Varna, Bulgaria, between October 2010 and May 2012. Patients and methods: The oxidative indicators were measured in 51 patients (26 men; mean age <math>59.84 \pm 1.60</math>) and 52 controls (26 men; mean age <math>59.50 \pm 1.46</math>) matched in age, sex, concomitant diseases, harmful habits and body mass index. Blood samples were collected once. A dichotomous logistic regression analysis was performed to identify the oxidative biomarkers (explanatory variables) independently associated with PAF appearance. Eight logistic models with a single explanatory variable were considered to find statistically significant predictors for PAF. A multiple logistic model was used to assess simultaneously the predictive value of all statistically significant explanatory variables. Results: The logistic regression models with a single explanatory variable showed that six of the eight indicators were associated with PAF development: PI-MDA (<math>P=0.03</math>), Er-MDA (<math>P&lt;0.001</math>), PI-GSH (<math>P&lt;0.001</math>), SOD (<math>P&lt;0.001</math>), CAT (<math>P&lt;0.001</math>), GSH-Px (<math>P&lt;0.001</math>). The multiple logistic model using all six explanatory variables confirmed the results (<math>P=0.006</math>). Constructed models were used to obtain adjusted estimate of odds and a prediction success matrix. It was found that the multiple logistic model could measure the PAF probability using values of these six markers. Conclusion: PI-MDA, Er-MDA, PI-GSH, SOD, CAT and GSH-Px were found to be oxidative biomarkers with predictive value for PAF occurrence. In clinical practice for each measured value of these biomarkers, the probability of the arrhythmia manifestation could be calculated.</p> <p><b>Keywords:</b> atrial fibrillation, oxidative markers, prediction, occurrence.</p>		
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**Paper Title:** Expedite Flow Completion on High Speed Network Through Protocols

**Abstract:** It has been proved by a lot of researchers that the present operation of TCP which is the main internet control protocol will suffer poor performance in future high speed networks. It has also been established that performance issues are very crucial in computer networks, for example when many computers are interconnected, complex interactions arise with unforeseen consequences. This complexity leads to degradation of performance if the system is not managed properly. Yet research on congestion control focuses almost entirely on maximizing link throughput, utilization and fairness, which matter more to the operator than the user. To arrest the situation, various factors which affect network performance were examined. Characteristics of congestion Control Protocols were described. Congestion Control Protocols like Transmission Control Protocol (TCP) and Explicit Congestion Protocol (XCP) were evaluated. The proposed congestion control protocol, Rate Congestion Protocol (RCP) was also evaluated. Then NS2 simulator was used under different scenarios to evaluate the performance of RCP and the aforementioned protocols to prove that RCP outperforms them in terms of expediting flows.

**Keywords:** Rate Control Protocol (RCP); Explicit Control Protocol (XCP); Processor Sharing (PS); Network Simulator 2(NS2); Transmission Control Protocol (TCP).

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<b>Paper Title:</b>	<b>Use of Network Performance Management Tools to Increase Productivity</b>					
3.	<p><b>Abstract:</b> Research has shown that there is a substantial lost in productivity anytime the performance of computer network becomes suspect. The resultant financial effect of supplementary bandwidth investment presents a daunting picture. Performance issues are very crucial in computer networks, for example when many computers are interconnected, complex interactions arise with unforeseen consequences. This complexity leads to degradation of performance if the system is not managed properly. The research explores the use of performance management aspect of the network management to maximize efficiency and productivity in computer network. It also tries to find out the features of performance management, examines current solutions to performance management features, investigate about techniques adopted to achieve quality of service and then attempts to recommend an appropriate performance approach to a medium sized company. The research is expected to reveal that performance management concept is one of the most efficient and effective network management approaches which ensures automated and preventive maintenance, thus relieving the network managers of doing manual investigation to find out many problems that the network might create. The research outcome enhances network availability to users, remote and automated monitoring to network administrators and then increase productivity to cooperate bodies.</p> <p><b>Keywords:</b> Throughput, Response Time, Availability, Protocol Analyzer, Multi Router Traffic Grapher (MRTG).</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Alizadeh M, Greenberg A, Maltz D, Padhye J, Patel P, Prabhakar B, Sengupta S, and Sridharan M.(2010) DCTCP: Efficient Packet Transport for the Commoditized Data Center. In ACM SIGCOMM.</li> <li>2. Andrew L., Floyd S., and Gang W. (2008) Common TCP Evaluation Suite. In Internet draft (work in progress), <a href="http://netlab.caltech.edu/lachlan/abstract/draft-irtf-tmrg-tests-00.html">http://netlab.caltech.edu/lachlan/abstract/draft-irtf-tmrg-tests-00.html</a>.</li> <li>3. Apoorva J. and Konstantinos P. (2008) Achievable Rate Region of Wireless Multi-hop Networks with 802.11 Scheduling. IEEE Transactions on Networking.</li> <li>4. Balakrishnan H., Dukkipati N., McKeown N., Tomlin C (2007). "Stability Analysis of Explicit Congestion Control Protocols," IEEE Communications Letters.</li> <li>5. Falk A., Katabi D. and Pryadkin Y. (2007) "Specification for the Explicit Control Protocol (XCP)", draft-falk-xcp-03.txt (work in progress).</li> <li>6. Feldmier, J. (1997) Network Traffic Management. Unix Review</li> <li>7. Floyd S. (2003). "HighSpeed TCP for Large Congestion Windows," RFC 3649, <a href="http://www.icir.org/floyd/hstcp.html">http://www.icir.org/floyd/hstcp.html</a>, December 2003.5, 9, 23, 52</li> <li>8. Floyd S. and Jacobson V. (1993), "Random early detection gateways for congestion avoidance" ACM Transactions on Networking, vol. 1, pp. 397-413</li> <li>9. Leinwand, A. and Conroy K. F. (1996) Network Management. A Practical Perspective. Second Edition. New York: Addison- Wesley.</li> <li>10. Mikalsen, A. and Borgesen, P. (2002) Local Area Network Management, Design and Security. A Practical Approach. New York: John Wiley.</li> <li>11. Oetiker, T. and Rand, D. (1997) Multi Router Traffic Grapher. <a href="http://ee-staff.ethz.ch/~oetiker/webtools/mrtg/mrtg.html">http://ee-staff.ethz.ch/~oetiker/webtools/mrtg/mrtg.html</a></li> <li>12. Subramanian, M. (2000) Network Management Principles and Practice. New York: Addison-Wesley.</li> <li>13. Tanenbaum, A. S. (2003) Computer</li> </ol>	11-16				