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| | Paper Title: | GI-Fi: The Emerging Technology of the New Short Range and High Data Rate Wireless Communication Era | |
| | | <p>Abstract: Over the past few decades, wireless technologies are evolving at a great pace. This leads to the invention of Gi-Fi (Gigabit Fidelity or Gigabit Wireless) which is ten times faster than the current most prevalent technology Wi-Fi. The key factor of this technology is the provision of data transfer rate measuring in multi gigabits per second. Evolution, architecture, working and features of Gi-Fi such as low power consumption, high data transfer rate, cost effectiveness and enhanced security which provide the basis for the next generation communicating devices are discussed in detail in this paper. This paper also provides comparisons among various wireless technologies and applications of gigabit fidelity.</p> <p>Keywords: CMOS , SIG , WECA , MAC , Wi-Fi, Gi-Fi</p> <p>References:</p> <ol style="list-style-type: none"> 1. S. Dheeraj and S. Gopichand, "Gi-Fi: New Era of Wireless Technology," [Online], Available at: http://www.yuvaengineers.com/?p=570, 2010. 2. 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| | Paper Title: | Design and Implementation of Fault Tolerance Network in Launch Control System | |

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| | <p>Abstract: Because the network of Launch Control System (LCS) handles a volume of critical data in a server environment and a minor fault in the network can cause uncontrollable status during periods of launch campaign time, the network should provide the very reliable service. To achieve the goal, this paper discusses what requirements the network expects and what differences the network has comparing to other common networks. After considering requirements, differences and compatibility with Supervisory Control and Data Acquisition (SCADA) system, the physical and logical configurations for the LCS network are proposed to improve the reliability and efficiency. The experimental results show what values in failover parameters are the most suitable for the LCS network. And other results and traffic shapes which are measured during practical operational period confirm that the traffic and processing load are effectively redistributed as planned.</p> <p>Keywords: Fault tolerance network, Industrial network, Launch Complex (LC), LCS, SCADA</p> <p>References:</p> <ol style="list-style-type: none">1. H. Jung, D. K Hwang, K. R. Moon, D. R. Kim and S. H. Ra, "Control of Mechanical ground Support Equipment for Korean Launch Complex," in 3rd Asia-Pacific International Symposium on Aerospace Technology, Melbourne, Session2A, 20112. L. S. Klivans and S. B. Yochelson, "Computer Controlled Launch Control and Checkout of Operation Satellite Systems," IEEE Trans, Aerospace, vol. 1, pp.1249-1261, 19633. J. R. Moyne and D.M. Tilbury, "The Emergence of Industrial Control Network for Manufacturing Control, Diagnostics, and Safety Data," in Proc. IEEE, vol. 95, no. 1, pp. 29-47, 20074. Industrial Ethernet: A Control Engineer's Guide, [Online]. Available: http://www.cisco.com5. H. Eto, H. Matsuo and F. Kurokawa "Network of Plant Remote Monitoring System Using UDP/IP for Wind-Farms," IEICE Trans, Communications, vol. E87-B, no. 12, pp. 3457-3464, 20046. KH. Mak and B.L. Holland, "Migrating electrical power network SCADA systems to TCP/IP and Ethernet networking," Power Engineering Journal, vol. 16, pp. 305-311, 20027. C. Kleedorfer, "Switch Based Industrial Ethernet Network," Computing & Control Engineering Journal, vol. 14, pp. 12-13, 20038. Ethernet Routing Switch 5000 Series, Competitive Performance Evaluation versus Cisco Catalyst 3750G and HP ProCurve 3400cl, No. 206106 [Online]. Available: http://www.tolly.com,9. Cisco Hot Standby Router Protocol, IETF RFC 2281 [Online], Available: http://www.ietf.org/rfc/rfc2281.txt10. J.T. Yu, "Applying IEEE802.1w to Improve Service Availability," IEEE International Conference on Dependable systems and Network, pp. B10-11, 200311. Link Aggregation Control Protocol, IEEE 802.1ad [Online], Available: http://standards.ieee.org12. Spanning Tree Protocol, IEEE 802.1D [Online], Available: http://standards.ieee.org13. Rapid Spanning Tree Protocol, IEEE 802.1w [Online], Available: http://standards.ieee.org14. Product analysis: HiPER Ring vs. RSTP, [Online], Available: http://www.belden.com15. R. H. McClanaban, "SCADA and IP: is Network Convergence Really Here?," IEEE Industry Applications Magazine, vol. 9, pp. 29-36, 200316. CW. Ten, CC. Liu and G. Manimaran, "Vulnerability Assessment of Cybersecurity for SCADA Systems," IEEE Trans, Power Systems, vol 23, pp.1836-1846, 200817. M.S. Thomas , P. Kumar, and V.K. Chandna, "Design, Development, and Commissioning of a Supervisory Control and Data Acquisition (SCADA) Laboratory for Research and Training," IEEE Trans, Power Systems, vol. 19, no. 3, pp. 1582-1588, 200418. B. Furht and R. Luken, "The Space Shuttle Launch Computer Control System at NASA Kennedy Space Center," in Proc. Euromicro '91 Workshop. IEEE Real Time Systems, pp.184-192, 199119. K. C. Lee, and S. Lee, "Performance evaluation of switched Ethernet for real-time industrial communications" Computer Standards & Interfaces, vol. 24, pp.411-423, 200220. S. Kjesbu, "Industrial Environment Proximity Switches," Communications Engineer, vol. 1, pp. 40-43, 200321. S. Rüping, E. Vonnahme, and J. Jasperneite, "Analysis of Switched Ethernet networks with different Topologies used in Automation Systems" in Proc. Fieldbus Technology Conference (FeT '99), Megdeburg, pp351-358, 199922. Communication Interface P8151B, [Online]. Available: http://www.rockwellautomation.com/23. MBE Driver, [Online]. Available: http://support.ge-ip.com/24. Caro, "End-to-End Fault Tolerance Using Transport Layer Multihoming" Ph.D Dissertation, CISC Dept, University of Delaware, 200525. Stream Control Transmission Protocol, IETF RFC 2960 [Online], Available: http://www.ietf.org/rfc/rfc2960.txt | 6-14 | | | | |
| 3. | <table><tr><td>Authors:</td><td>Tong Yuanjian, Tong Xin, Zhang Bowen, Gao Aijun, Xu Lianghua</td></tr><tr><td>Paper Title:</td><td>Denitrogen and Graphitization Kinetics Analyze and Mechanism of Density Change for Polyacrylnitrile-Based Carbon Fibers Heat Treated up to 2400°C</td></tr></table> <p>Abstract: Polyacrylnitrile-based carbon fibers were continuously heat treated up to 2400oC under N2 atmosphere for different time. Element analyse, X-ray diffract spectrum and gradient column were used to determine the nitrogen content, crystal size and density of the resulted carbon fibers respectively. The density steadily decreased with increasing of temperature up to around 1700 oC, then increased quickly with further increasing of temperature. A mechanism of density change was proposed with respect to denitrogen reaction and graphite crystal growth during heat treatment. The kinetics parameters of the denitrogen reaction and the graphite crystal growth were calculated separately. By applying these kinetics parameters, bulk density of the carbon fibers treated at different temperature was predicted, which is in good accordance to the experimental data.</p> <p>Keywords: Carbon fiber; Denitrogen; graphitization. Kinetics;</p> <p>References:</p> <ol style="list-style-type: none">1. C.Pradere, C. Sauder. Transverse and longitudinal coefficient of thermal expansion of carbon fibers at high temperatures (300–2500K). Carbon, 2008, 46(14): 1874-1884.2. C. Pradere, J. C. Batsale, J. M. Goyheneche, et al. Thermal properties of carbon fibers at very high temperature. Carbon, 2009, 47(3): 737-743.3. M. A. Rahaman, A. F. Ismail, A. Mustafa. A review of heat treatment on polyacrylonitrile fiber. Polym Degrad Stabi, 2007, 92(8): 1421-1432.4. N. Roy, R. Sengupta, A. K. Bhowmick. Modifications of carbon for polymer composites and nanocomposites. Prog Polym Sci, 2012, 37(6): 781-819.5. X. Qin, Y. Lu, X. Hao, et al. A comparison of the effect of graphitization on microstructures and properties of polyacrylonitrile and mesophase pitch-based carbon fibers. Carbon, 2012, 50(12): 4459-4469 .6. A.J. Gao, C.J. Su, S. Luo, et al. Densification mechanism of polyacrylonitrile-based carbon fiber during heat treatment. J Phys Chem | Authors: | Tong Yuanjian, Tong Xin, Zhang Bowen, Gao Aijun, Xu Lianghua | Paper Title: | Denitrogen and Graphitization Kinetics Analyze and Mechanism of Density Change for Polyacrylnitrile-Based Carbon Fibers Heat Treated up to 2400°C | 15-18 |
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| Paper Title: | Analyzing the Cost Structure of Garments from Fiber to Fashion | | | | | |
| 4. | <p>Abstract: In garments manufacturing sector, a business is totally depends on garment costing. Costing is a very complex procedure, with set patterns and guidelines followed by the industry. Garment prices are mainly based on the fabric consumption. Hence we must pay more attention to find out the fabric consumption more accurately or closely. It needs sound knowledge and good practical experience to find out the fabric consumption. It is difficult to find out costs for every process as there are some inbuilt costs while costing. In order to do perfect garment costing, one must know about all the activities including purchase of fabrics, sewing, packing, transport, overheads, etc. and also about their costs, procedures, advantages and risk factors. Merchandiser must be aware that there are always fluctuations in the costs of raw materials and accessories, charges of knitting, processing, finishing, sewing and packing, charges of transport and conveyance, shipping, over heads, banking charges and commissions, etc. The method of making costing will vary from style to style, as there are many different styles in garments. In our study, we have analyzed the calculation process. To work on the prices exactly, we have worked on full measurements of the three knitted garments which are men’s t-shirt, Ladies’ t-shirt & pant, especially the measurements of Chest, Body Length and Sleeve Length and waist band. Different types of costing and their variances are also discussed in our study.</p> <p>Keywords: Costing, Garments, Fiber, Fashion, Consumption.</p> <p>References:</p> <p>1. Vabatosh banarji , Cost Accounting.</p> <p>2. Prof.M.A.Kashem Garments Merchandising, 2008, Apparel Manufacturing Engineering Department (BUTEX) Bangladesh.</p> <p>3. http://www.garmentsmerchandising.com/factors-affecting-garments-costing/, Factors Affecting Garments Costing.</p> <p>4. Cost Analysis in Garment Industry, International Journal of Recent Advances in Multidisciplinary Research Vol. xx, Issue xx, pp.xxx-xxx, September, 2015.</p> <p>5. http://www.textiletoday.com.bd/oldsite/magazine/715, Fashion Merchandising: Garment Costing.</p> <p>6. J. A. Rosenau and D. Wilson, Apparel merchandising. New York: Fairchild, 2001.</p> <p>7. Dr. Shah Alimuzzaman Belal Understanding textiles for a merchandiser, Bangladesh.</p> <p>8. Burritt, Chris. "Cost-Cutting Is Rampant in Fashion." Bloomberg Business Week. Bloomberg, 26 May 2011. Web. 12 Nov. 2014.</p> <p>9. The High Cost of Cheap Clothes. Dir. Suroosh Alvi. Prod. Andrew Glazer. Perf. Suroosh Alvi. The High Cost of Cheap Clothes. Vice News, 15 Oct. 2014. Web. 12 Nov. 2014.</p> <p>10. Hodge, Brooke, and Patricia Mears. Skin Bones: Parallel Practices in Fashion and Architecture. New York: Thames & Hudson, 2007. Print</p> <p>11. J.M. Johnson and E.C. Moore, Apparel product development (2nd ed.) Upper Saddle River: Prentice Hall, 2001.</p> | 19-21 | | | | |