DOWNLOAD PDF MULTIPLEX MAPPING.

Chapter 1 : Multiplex Dr - Centreville VA - MapQuest

Fruition Multiplex Mapping allow you to monitor fruit anthocyanin content throughout your vineyard.

Studies have shown that networks, obtained from the analysis of specific frequency components of brain activity, present peculiar architectures with unique profiles of region centrality. However, the identification of hubs in networks built from different frequency bands simultaneously is still a challenging problem, remaining largely unexplored. Here we identify each frequency component with one layer of a multiplex network and face this challenge by exploiting the recent advances in the analysis of multiplex topologies. First, we show that each frequency band carries unique topological information, fundamental to accurately model brain functional networks. Introduction The brain functional network is generally built by interconnecting brain regions according to some measure of functional connectivity Bassett and Bullmore, ; Bullmore and Sporns, , Studies using functional magnetic resonance imaging Van Den Heuvel and Pol, ; Poldrack and Farah, fMRI provided convincing evidence supporting the existence of special regions, i. Generally, the strength of this connectivity is empirically estimated by inter-regional correlations calculated after post-processing and filtering fMRI signals with a conventional pass band, keeping components between 0. The importance of each region with respect to the overall connectivity, i. However, it has been shown that networks with unique hub regions can be built from different frequency ranges Sasai et al. Such an evidence impels the development of a novel framework to account for full information from all frequency bands separately and simultaneously, without discarding any particular component or aggregating some of them to build single networks. In this study, we tackle this challenging issue by employing the theoretical and computational tools recently developed for analyzing and modeling multiplex networks Mucha et al. Multiplex architectures are special networks consisting of different layers, each encoding a different type of relationship or interaction between nodes Boccaletti et al. Recent studies modeled and analyzed brain networks using temporal networks, a special type of multilayer system Bassett et al. This novel approach rises two fundamental questions, requiring to i verify if and how brain regions playing the role of hubs in the new multiplex functional network differ from the ones obtained using standard network approaches; and ii if and how we can exploit such differences to improve our understanding of brain disorders. In the following, we will provide extensive evidence demonstrating that hub regions in multiplex functional networks are different from hub regions in standard functional networks and that such differences in the nodal centrality profile allow us to identify patients affected by schizophrenia more accurately than conventional approaches based on discarding or aggregating information about brain functional activity. The data set was downloaded from the following repository: It includes resting functional and anatomical MRI data acquired from 71 Schizophrenic patients and 74 healthy controls age: Parameters of fMRI acquisition released by the provider are as follows: One patients data was discarded from all analyses due to the shortness of the data length. Signal fluctuations of fMRI are driven by not only neural but also physiological effectsâ€”such as respiration and cardiac pulsationâ€”and environmental conditionsâ€”such as scanner instabilities and subject motion. These nuisance effects can be canceled out by discarding, for instance, the signal from the ROI centered in the white matter, the signal from the ventricular ROI, and the signal from the ROI located within the soft-tissue. We have linearly removed these components as well as six motion-correction parameters after temporally shifting them by optimal time-lags yielding the highest correlation with the averaged signal of all gray matter voxels Anderson et al. Statistical Analysis of Age, Gender, and Handed-Ness Distribution We performed a Wilcoxon rank-sum test, a non-parametric version of unpaired two-sample t-test, to test the null hypothesis that phenotypic details in the two groups are sampled from continuous distributions with equal medians. However, we show in Supplementary Figure 3 that, by including such information in the classification procedure, discrimination accuracy and all other statistical indicators are not significantly improved with respect to the case when phenotypic data is not accounted for, suggesting that differences in handed-ness are not responsible for our findings. For each individual, the coherence between all pairs of in-ROI averaged signals was estimated in specific frequency bands, as described in the text. We kept the edges between pairs of ROIs whose weight was

significantly different from a null model where observed signals were replaced by surrogates. More specifically, we used the well-known iterative amplitude-adjusted Fourier transform IAAFT algorithm to build surrogate time series preserving the power spectrum and the probability density of the original ones, while removing higher-order self-correlations. Let wij indicate the weight obtained from empirical data: It is worth remarking that the chosen threshold provides a statistical test with significance On one hand, lower thresholds would keep links that are more likely to be observed by chance; on the other hand, higher thresholds would dramatically reduce the density of the network making any further analysis less reliable. Our choice provides a good trade-off between these two extremal cases. Finally, we used the values zij as entries of the resulting connectivity matrix. As a final remark, it is worth mentioning that using the absolute value of z-scores does not allow to distinguish between significantly correlated and anti-correlated signals, a characteristic that is typically exploited in the neuroscience literature. In a future study, we plan to take into account, separately, the information obtained from correlated and anti-correlated signals by using distinct layers. By comparing against other standard metrics, we will be able to quantify how our results might be further improved. Multiplex Network Model A multilayer network allows to encode different types of interactions or relationships among a set of nodes. More specifically, in the case of our study we make use of multiplex networks to model functional connectivity. In a multiplex network, the links are of different type: In this type of architectures, nodes exist in one or more layers, i. Correlation networks, as the ones used in this study, define edge-colored graphs where each layer encodes the correlations observed in a specific frequency band. However, it has been shown that by interconnecting nodes with their replicas across layers, the resulting interconnected multiplex network can be described by an adjacency tensor De Domenico et al.

Chapter 2 : Years of Topographic Mapping - ArcNews Fall Issue

Our portfolio of multiplex assays, ELISA, and RIA biomarker assays, kits and reagents consistently perform at a high standard, saving time and labor.

A portion of an early USGS topographic map surveyed in , using contours for terrain and the water-lining method of representation for water bodies. Congress to authorize the U. During the next years, mapping techniques evolved from field surveys through photogrammetry to the computer-based methods currently used, and the scales and content of the topographic maps changed. It is the purpose of this two-part article to provide details of the USGS mapping processes through time and to help demonstrate that innovations by USGS employees and provision of public domain geospatial data helped spur the evolution and development of digital GIS and the commercial market for geospatial data and products of today. This first article describes topographic mapping developments prior to widespread use of GIS. In the late 19th century, surveyors created topographic maps in the field. They measured a series of points in the field, using tape and compass traverses with elevations determined with an aneroid barometer and used in a process known as field sketching to draw a terrain representation using contours. The introduction of the plane table and alidade, which could measure vertical angles, point positions, and elevations much more rapidly, greatly increased the accuracy of data shown on topographic maps but still required the surveyor to field sketch the contours after control points had been identified. The aid of a visual three-dimensional model in the office to construct the surface representation awaited the development of photogrammetry. During this time, USGS maps were created at scales of 1: The scales were increased with time, and by , most of the maps were created for minute areas and produced at a scale of 1: Features shown on the maps included civil divisions of state, county, township, and city or village; public works, including railroads, tunnels, wagon roads, trails, bridges, ferries, fords, dams, canals, and acequias; hypsography with contours and floodplain representations; and miscellaneous features of forest, sand, and sand dunes. The reproduction of maps from the original field sketches used a lithographic printing process based on copper plates. The image of the topographic features was engraved on the copper plates. A three-color process was used with civil divisions and public works in black, hydrography in blue, and hypsography and miscellaneous features in brown. Throughout the s, USGS experimented with photogrammetry, but it was not until the s during the Great Depression, when the Tennessee Valley Authority needed complete topographic maps of the entire Tennessee Valley and was under time constraints for mapping, that USGS established a multiplex mapping office in Chattanooga, Tennessee. The ability to view a three-dimensional terrain surface by doubly reflecting the overlap area, or stereomodel, of a pair of stereophotos in a multiplex stereoplotter effectively replaced the requirements of field sketching. An operator could fix a vertical floating mark at a preset elevation in the stereomodel and trace contours to represent the terrain. Similarly, tracing a road or other planimetric feature in the stereomodel, but allowing the mark to change elevation along the feature, provided recording of all required planimetric features for the topographic map. After , USGS used pen-and-ink drawings that were photographed to film separations, eliminating the need for copper plates. After a few years, the pen-and-ink process was replaced by engravers and scribe coat. The scribe coat replaced the film in the pen-and-ink process and could be used directly for photographic reproduction. With the larger scale, USGS included almost features separated into color groups for the five color plates to be used in the film-based reproduction process. The five plates included cultural features, such as roads shown with casings, buildings, and much of the type used on the map on a black plate; road fills, urban tints, Public Land Survey lines, and other features on a red plate; woodland tint and other vegetation on a green plate; hydrographic features on a blue plate; and contours, depressions, and other hypsographic features on a brown plate. The color separations were composited on a five-color lithographic press. Also, during this period, the Kelsh stereoplotter, invented by Harry T. Kelsh of USGS, was widely adopted. Additional innovation and developments provided USGS with solutions for stereoplotting, aerotriangulation, point measurement, and other photogrammetric operations. The Kelsh stereoplotters were used in areas of moderate to high relief, but low-relief areas, such as along the coasts and large parts of the Great Plains,

required the capabilities of the "heavy" stereoplotters that used projection by mechanical rods. The Kelsh and the heavy plotters were used until completion of the 7. The development by USGS of the orthophoto concept and building of a practical orthophotoscope by Bean, with a patent in , led to the production of orthophotoquadsâ€"rectified aerial photos. Orthophotos became a standard product of USGS and later served as a base for the 7. Many other innovations affected the mapping process, such as the measurement of angles in the field with instruments, including transits and theodolites. Distances were measured with electronic distance measuring units using microwave technology and, later, lasers. The development of computers may represent the greatest technological innovation to change the mapping process, and USGS employees were quick to embrace this technology. In the s, USGS developed the AutoPlot, a device that used stepping motors to move scribing engravers to create a scribe coat negative of the topographic map neat line latitude and longitude lines that bound the quadrangles and horizontal pass points. A USGS topographer engraves topographic map information onto a copper plate for map reproduction. After , USGS embarked on three different tracks using digital technology. During the same time, USGS used advances in photogrammetric technology that generated an orthophotograph to simultaneously produce a digital elevation model DEM. The second track was the automation of the map production operation. The Digital Cartographic Software System development included retrofitting analog stereoplotters, such as the PG-2, with three-axis digitizers to collect and record the x,y coordinates and attributes of geographic features from the stereomodel to a magnetic tape. The tape later was used to drive a large-format automatic plotter, a Gerber , to engrave the map data onto the scribe coat, or to drive a photohead device to expose a film negative. The scribe coats or film negatives from the final editing process became the color separations necessary for the five-color press to create the lithographic map. The final track was the development of a land-cover data-generating program, Land Use Data Analysis. This data became the first complete land-cover dataset for the conterminous 48 states and, as with the DLG and DEM data, was provided in the public domain. This software was the basis of map projection packages that became part of GIS software, which would have its commercial debut in the s. About the Authors E. Lynn Usery is a research geographer and director of the U. He received a B. Dalia Varanka is a research geographer with U. She received her B. Finn holds a B. He has worked as a computer and IT specialist and a research cartographer with the U. Geological Survey for the past 10 years. More Information For more information, contact E.

Chapter 3 : Multiplex Machining Kansas St South Houston, TX Machine Shops - MapQuest

(Multiplex mapping of human cDNAs) Technical Report Nierman, W.C. J. Craig Venter, National Institute of Neurological Disorders and Stroke, has begun to identify genes expressed in the human brain by partially sequences cDNA clones.

Recalling elevators to a safe exit floor Activating another fire alarm panel or communicator Mapping[edit] Also known as "cause and effect" or "programming", mapping is the process of activating outputs depending on which inputs have been activated. Traditionally, when an input device is activated, a certain output device or relay is activated. As time has progressed, more and more advanced techniques have become available, often with large variations in style between different companies. Zones[edit] Zones are usually made by dividing a building, or area into different sections. Then depending on the specific zone, a certain amount and type of device is added to the zone to perform its given job. Groups[edit] Groups contain multiple output devices such as relays. This allows a single input, such as a smoke detector or MCP, to have only one output programmed to a group, which then maps to multiple outputs or relays. Boolean logic[edit] This is the part of a fire panel that has the largest variation between different panels. It allows a panel to be programmed to implement fairly complex inputs. For instance, a panel could be programmed to notify the fire department only if more than one device has activated. It can also be used for staged evacuation procedures in conjunction with timers. Networking[edit] The principle of networking involves connecting several panels together to form a system. Inputs on one panel may activate outputs on another, for example, or the network may allow monitoring of many systems. Networking is often used in situations where one panel is not large enough, or in multiple-building situations. Networking is also an effective way to decouple systems to reduce the risk of a large portion of a facility going offline at any time due to system failure or maintenance requirements. Sub-Networks can be created using either hardware or software architectures. Networked systems normally are more costly and involve additional training and system configuration for successful implementation. Although quasi-standards exist that allow panels from different manufacturers to be networked with each other, they are not in favor with a lot of companies. One of the most common protocols used is BACnet which is common for various type of industrial networks. Interoperable systems greatly reduce the long term maintenance cost of a system and can provide greater emergency response than proprietary offerings. More recently, some panels are being networked with standard Ethernet , but this is not yet very common. Most organizations choose to create their own proprietary protocol, which has the added benefit of allowing them to do anything they like, allowing the technology to progress further. However, a bridging layer between the proprietary network and BACnet is usually available. Monitoring[edit] In nearly every state in the USA, the International Building Code requires fire alarm and sprinkler systems to be monitored by an approved supervising station. A fire alarm system consists of a computer-based control connected to a central station. These systems will generally have a top level map of the entire site, with various building levels displayed. The user most likely a security guard can progress through the different stages. A lot of these systems have touch screens, but most users tend to prefer a mouse and a normal monitor , as it is quite easy for a touch screen to become misaligned and for mistakes to be made. With the advent of the optical mouse , this is now a very viable option. A police officer resets the fire alarm control panel for Potomac Hall at James Madison University There are many functions on a fire alarm panel. Some of these are: Class change[edit] This button, or input terminals connected to an external timeswitch, will sound the notification appliances briefly in a different cadence. This ensures pupils are familiar with the sound of the alarm and means the notification appliance circuits are tested several times a day. System reset[edit] This resets the panel after an alarm condition. All initiating devices are reset, and the panel is cleared of any alarm conditions. A system reset is often required to clear supervisory conditions. A system reset does not usually clear trouble conditions. Most trouble conditions will clear automatically when conditions are returned to normal. Acknowledge[edit] This function, also abbreviated to "ACK", is used to acknowledge an abnormal situation such as an alarm, trouble or supervisory. This usually stops the panel piezo from sounding and makes the active LED go solid. Drill[edit] Also known as "manual evacuation" or "evacuate". Using the drill function, an alarm is normally not

transmitted to the fire department or monitoring center. However, building personnel often notify these agencies in advance in case an alarm is inadvertently transmitted. Signal silence[edit] Also known as "alarm silence" or "audible silence". Audible silence allows for easier communication amongst emergency responders while responding to an alarm. This can also be used during construction as a means of a preliminary test, before the final full test. Audible silence is usually used right after the emergency has been dealt with and the building is ready to be reoccupied again. A system reset usually comes right after. Lamp test[edit] Also known as "flash test". This button is still used on many panels. This function is used to check the condition of the LEDs themselves. A "Lamp Test" button is required by code on multi-zone panels installed in Canada. Many panels do a lamp test when the system is reset. Walk Test[edit] "Walk Test" is a method of testing many fire alarm devices that saves time and requires fewer technicians at the location. Doing so will send a signal to the panel, which will pulse the NAC a certain amount of times to indicate the zone on which the device is wired to. Silent Walktest will only flash the alarm light on the panel, thus not sounding the signals. Panel indicators[edit] Many panels today have the capability of alerting building personnel of a situation which can arise into a potentially serious problem. Fire alarm panels indicate an abnormal condition via a solid or flashing LED. Some panels also contain a small sounder, used in conjunction with the visual alert. A number of indicators are shown below. Note that not all fire alarm panels have all of these indicators. Alarm[edit] Also known as "Fire" or "General Alarm". This indicator is lit when an alarm condition exists in the system, initiated by smoke detectors , heat detectors , sprinkler flow switches, manual pull stations , manual call points , or otherwise. Along with the indicator on the panel, notification appliances, such as horns and strobes, are also activated, signaling a need to evacuate to building occupants. In an alarm condition, the fire alarm panel indicates where the alarm originated. The alarm panel can be reset once the device which initiated the alarm is reset, such as returning the handle of a manual pull station to its normal position. Audible Silence[edit] The Audible Silence indicator is used in conjunction with the "Alarm" indicator. It indicates that the fire alarm panel is still in an alarm condition, but that notification appliances have been silenced. While the alarm is silenced, other functions in an alarm condition continue to operate, such as emergency service for elevators, stairway pressurization, and ventilation functions. A new alarm initiation while the alarm is silenced will take the panel out of Audible Silence and reactivate the notification appliances. Drill[edit] Also known as "Manual Evacuation" or "Evacuate". On panels containing this function, the "Drill" indicator shows that the alarm condition was activated from the fire alarm panel, often in order to conduct a fire drill. When an alarm is initiated for a drill, the fire department or monitoring company is usually not notified automatically. The prealarm LED is lit when one device has tripped. The prealarm LED may also be used if an addressable smoke detector registers low levels of smoke in the detection chamber, but not enough to trigger a full alarm. If there is a voice evacuation system, it will usually instruct building occupants to await further instructions while the alarm is being investigated. Priority 2 alarm[edit] Also known as "Security". This LED can only activate if there is a secondary device hooked into the "Priority 2 Alarm" terminals. This secondary device could be a security system, building management system, or another fire alarm control panel. Trouble[edit] Also known as "Fault" or "Defect". When held steady or flashing, it means that a trouble condition exists on the panel. Trouble conditions are often activated by a contaminated smoke detector or an electrical problem within the system. Trouble conditions are also activated by a zone being disabled disconnected from the system , a circuit being disabled, low power on the backup battery, the disabling of a notification appliance, the ground faults, or short or open circuits. In a trouble condition, the panel displays the zone or devices causing the condition. Usually, the "Trouble" indicator goes out automatically when the situation causing the trouble condition is rectified, however in some systems the panel must be reset to clear the trouble alarm. However, some panels require a reset regardless of whether the supervisory point is latching or non-latching. AC Power[edit] Also known as "Normal". When an AC power condition changes, the Trouble indicator comes on and the AC power indicator goes off and the screen alerts building personnel of a power failure. If the AC power indicator is lit without any other indicators also lit, then the system is in a normal condition. If no LEDs are lit, there is no power source feeding the panel. DC Power[edit] This is used to tell the operator that DC power batteries are being charged or used. While using DC power, the system remains in a fault condition. High Rate[edit]

This LED is on when the battery charger is in the high rate charge state, in which the charger voltage is boosted to charge batteries faster after being depleted.

Chapter 4 : Driving Directions from Rajkot to city Pulse Mall 2 Multiplex

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Chapter 5 : Fruition Sciences | Multiplex Signature

Rewiring and optimization of metabolic networks to enable the production of commercially valuable chemicals is a central goal of metabolic engineering.

Chapter 6 : Fruition Sciences | Multiplex Mapping

Rewiring and optimization of metabolic networks to enable the production of commercially valuable chemicals is a central goal of metabolic engineering. This prospect is challenged by the complexity of metabolic networks, lack of complete knowledge of gene function(s), and the vast combinatorial.

Chapter 7 : WOA3 - Multiplex mapping of protein interactions - Google Patents

The present invention incorporates, inter alia, two-hybrid screening methods, compositions, systems, and kits for multiplex analysis of post-translationally modified protein-protein interactions.

Chapter 8 : Adventure Multiplex 2: The Village Map - calendrierdelascience.com

Multiplex Immunohistochemistry (mIHC) allows for the simultaneous detection of multiple targets of interest in a single tissue section. Using this method it is therefore possible to evaluate several effectors of a signal transduction pathway at one time, co-localization of markers, or distribution of molecules relative to one another within.

Chapter 9 : VINTAGE VIETNAM WAR DEPT OF ARMY MANUAL MULTIPLEX MAPPING | eBay

Multiplex has been delivering landmark property, commercial structures and infrastructure assets for more than 55 years, with a focus on sustainable growth.