DOWNLOAD PDF TECHNICAL REPORT ABSTRACTS

Chapter 1 : Technical Report Abstracts

An abstract is a summary of a body of information. Sometimes, abstracts are in fact called summariesâ€”sometimes, executive summaries or executive abstracts. The business and scientific worlds define different types of abstracts according to their needs.

Tables and figures should be numbered consecutively throughout the text, and, in a thesis or long report, separate lists of tables and figures are normally included at the beginning. Tables and figures should always have descriptive captions, and if they come directly from sources then the sources must be properly credited in the captions. Never present tables and figures without some useful interpretation of them in the text. Title It is always necessary to have a highly concrete title consisting only of words that contribute directly to the report subject. Be sure that the title contains no filler and includes few abbreviations or acronyms, yet also be certain that it is complete. In a journal article, more people will read the abstract than any other part of the paper, so its succinctness and accuracy are vital. The abstract is always self-contained, and is sometimes presented as a separate page. The best abstracts do these things, usually in this order: In a thesis, an abstract should fit on one page if possible. Passive voice and past tense verbs are usually appropriate for the purposes of summary, although many journals now print abstracts in the present tense with active voice. What follows is a short excerpt from the opening of an abstract. Note how the first sentence summarizes the nature of the investigation, while the second identifies the rationale: This study determines the locus of rifting at the southern end of the Eastern Branch of the East African Rift System within northern Tanzania. Here, the Eastern Branch diverges into a km-wide area of block faulting, and consequently it is uncertain whether the rifting extends seawards across the Tanzania continental shelf or directly southwards into central Tanzania. In this study, the locus of rifting is investigated by. Introduction The introduction should offer immediate context for the reader by establishing why the problem being studied is important and by describing the nature and scope of the problem. You should describe your specific approach to the problem and establish how your investigative work meshes with the needs of the field or with other work that has been done. The so called "funnel system" of organizationâ€”moving from a broad approach to a gradually narrowed scopeâ€”is highly recommended here. Present tense is also highly favored, especially as you present accepted scientific truths and the objectives of the report. Most journals allow "we" or "our" to be used in the introduction, especially as you outline your objectives or summarize the common goals of researchers. Here is an ideal opening sentence from a report introduction. Note how it launches the reader directly into the science: To produce highly reliable metal-ceramic joints, we must fully understand the joining mechanisms. Literature Review When articles appear in journals, the most noteworthy literature will usually be reviewed only briefly in the introduction or as it becomes relevant. In technical reports and theses for your classes, however, an entire section of your paper may well be devoted to a literature review. Literature reviews range from exhaustive searches to summaries of only the most germane articles, but the fundamental objective is always the same: Writing a literature review requires you to establish relationships among findings from other researchers and to condense many pages of published material into shorter segments. Therefore, your ability to assimilate material and, in effect, tell your own story, becomes critical. Stylistically, literature reviews are often written in the past tense, but many authors favor the present tense when the research being summarized was completed recently. Passive voice may seem tempting to use, but active voice will serve you well here, because you can smoothly place the names of authors into the subject slot of the sentence: As necessary, this section includes a description of the relevant apparatus and materials used, and photographs and diagrams could be used, sparingly, to help clarify the procedures. Stylistically, passive voice and past tense verbs are essential in this section, but be sure that your sentences are written efficiently and contain simple subjects and verbs when possible. The basic form of directly saying "what was done; why it was done that way" should be used over and over in the "Experimental" section. Here is an ideal sentence from the "Experimental" section of an engineering report: After the dispersion thickened it was poured into molds coated with Vaseline to prevent sticking. Finally, subsections, perhaps numbered, are often used to aid in the organization of the material. Here

you straightforwardly present the results of your experiment, usually with minimal discussion. Naturally, the use of tables, graphs, and figures is especially enlightening here, as are explanations of how data were derived: The conductivities of the top and bottom values for each measurement were averaged and the results are listed in Table 3. Take care not to include your experimental methods hereâ€”that is the job of the previous section. Discussion Often this section is combined with "Results" into one "Results and Discussion" section; this allows you to interpret your results as you summarize them. Logical deductions must be made, errors of or ambiguities in the data should be discussed, and even simple causal relationships must be confirmed. It is important here not to rely on a table or figure to do the work for youâ€”you must outrightly and concisely interpret. Beware of making sweeping generalizations or unfounded statements. Again, passive voice may seem tempting here, but active voice can be highly valuable, especially as you make a logical assertion: Obviously, the formation of the protective layer prevented rapid oxidation. As a rule, use past tense to summarize your actual results; use present tense to present established facts or present your interpretations "The helium sintering data show. Finally, consider referring back to the key literature of your introduction or literature review in this section. Enlighten your readers and perhaps even elevate your work by discussing your results in relation to the published results of others. Conclusions In "Discussion" you supplied your reasoning; now you present the exact conclusions you have arrived at as they relate to your experimental objectives. Conclusions may be listed and numbered, and it should be made clear how they contribute to the understanding of the overall problem. In a sense, you are going back to the big picture provided by your introduction now, incorporating your conclusions into that picture, even suggesting where more work is needed. This section may be shortâ€”often about the same length as the abstract. The following is an excerpt from the "Conclusions" section of a report: These results confirm the hypothesis posed in the Introduction: Further work is needed in this area to determine. Acknowledgments If appropriate, briefly recognize any individual or institution that contributed directly to the completion of the research through financial support, technical assistance, or critique. In a thesis, this section may appear just before the introduction. References List cited sources on a References page using the Authorâ€”Year or Number system see Chapter 5 of this handbook. Appendices If necessary, use an "Appendices" section to present supplementary material that was not included in the main body of the report because it would have detracted from the efficient or logical presentation of the text, usually either by sheer bulk or level of relevance. A typical appendix would be a list of organizations relevant to the material of the report, or a list of symbols used in the text, or the derivation of an equation that was used in the text but could not be referenced because it did not originally appear in a standard text. As with figures and tables, appendices should be numbered or lettered in sequence; i.

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Chapter 2 : Abstract (summary) - Wikipedia

An updated version of this document is provided in the actual developer release package; this technical report is intended to provide easy access to near-current instructions for those who are evaluating the system and would like to learn more before downloading the entire package.

Technical report abstracts ported You are here: Many links might not work. In particular, we cluster abstract data to evaluate ISI Web of Knowledge subject categories as descriptive labels for astrobiology documents, and to assess individual researcher interdisciplinarity to determine where collabo- ration opportunities might occur. We find that the majority of the UHNAI team is engaged in interdisciplinary research, and suggest that our method could be applied to additional NASA Astrobiology Institute teams to identify and facilitate collaboration opportunities. This paper presents an alternative algorithm for finding the terminal heads of length k of a given string in a given context-free grammar for given k. In [2] an efficient method of producing an LR 1 parser for all LR 1 grammars was described which involves resolving conflicts at states of the LR 0 parsing machine, employing two phases. If conflicts cannot be resolved by these means, then in Phase 2 the parts of the machine involved in lane tracing are regenerated, avoiding the combination of states that potentially lead to conflicts. Other works along the same lines include [4, 5]. The criterion employed in [2] for determining whether or not states may be combined was that of weak compatibility, as defined in [3]. In this paper we describe an alternative method for determining whether states can be combined. According to testing by [6] this method requires less computation. It is also more efficient. Taken together with Phase 1, this new method of Phase 2 will, as before, produce a conflict-free LR 1 parser for all LR 1 grammars. The paper considers circumstances in which it is advantageous to resolve reduce-reduce conflicts at compile time, rather than at compiler-construction time. The application considered is that of translating English to one of the Romance languages, such as Italian, where adjectives and nouns have distinctive forms depending on their gender. Participants were observed while searching and browsing the internet for campaign information in a mock-voting situation in three online note-taking conditions: Note taking significantly influenced the manner in which participants browsed for information about candidates. Note taking competed for time and cognitive resources and resulted in less thorough browsing. Effects were strongest when participants thought that their notes would be seen by others. Think-aloud comments indicated that participants were more evaluative when taking notes, especially shared notes. Our results suggest that there could be design trade-offs between e-Democracy and e-Participation technologies. Resource Allocation using Virtual Clusters â€" M. We formalize the resource allocation problem with a number of underlying assumptions, determine its complexity, propose several heuristic algorithms to find near-optimal solutions, and evaluate these algorithms in simulation. We find that among our algorithms one is very efficient and also leads to the best resource allocations. We then describe how our approach can be made more general by removing several of the underlying assumptions. The automobile industry has produced many cars with new features over the past decade. Taking advantage of advances in technology, cars today have fuel-efficient hybrid engines, proximately sensors, windshield wipers that can detect rain, built-in multimedia entertainment, and all-wheel drive systems that adjust power in real-time. However, the interaction between the driver and the car has not changed significantly. We have developed the initial concepts and ideas for this type of virtual display. Through gaze tracking the digital information is superimposed and registered with real world entities such as street signs and traffic intersections. To learn more about microbes and overcome the limitations of standard cultured methods, microbial communities are being studied in an uncultured state. In such metagenomic studies, genetic material is sampled from the environment and sequenced using the whole-genome shotgun sequencing technique. This results in thousands of DNA fragments that need to be identified, so that the composition and inner workings of the microbial community can begin to be understood. Those fragments are then assembled into longer portions of sequences. However the high diversity present in an environment and the often low level of genome coverage achieved by the sequencing technology result in a low number of assembled fragments contigs and many unassembled fragments singletons. The identification of contigs and

singletons is usually done using BLAST, which finds sequences similar to the contigs and singletons in a database. An expert may then manually read these results and determine if the function and taxonomic origins of each fragment can be determined. In this report, an automated system called Anacle is developed to annotate, following a taxonomy, the unassembled fragments before the assembly process. Knowledge of what proteins can be found in each taxon is built into Anacle by clustering all known proteins of that taxon. The experiments show that 1 MCL is superior to SOMs in annotation and in running time performance, 2 Anacle achieves good performance in taxonomic annotation, and 3 Anacle has the ability to generalize since it can correctly annotate fragments from genomes not present in the training dataset. These results indicate that Anacle can be very useful to metagenomics projects. The paper begins with the premise that it is not possible to implement an efficient, modern RAP strategy today without the effective use of information technology. The paper then leads the architect through the functionality of the systems components and environment needed to support RAP, pausing to justify them at each step. The paper can be used as a long-term guide through the systems development process as it is not necessary and likely not possible to implement all functions at once. One can use redundancy to execute replicas of some of the tasks on the m-n computers. The problem is to determine how many replicas should be created for each task, or more precisely the number of task instances that should be created for each task and to which computers these instances should be allocated in order to maximize the probability of successful application completion. A challenge for using these platforms is that the compute resources are volatile. Due to this volatility the vast majority of desktop grid applications are embarrassingly parallel and high-throughput. Deeper understanding of the nature of resource availability is needed to enable the use of desktop grids for a broader class of applications. In this document we further this understanding thanks to statistical analysis of availability traces collected on real-world desktop grid platforms. To combat this problem, software measurement provides a systematic and empirically-guided approach to control and improve software development processes and final products. It uses software sensors to collect metrics automatically and unobtrusively. It employs a domain-specific language to represent telemetry trends in software product and process metrics. Project management and process improvement decisions are made by detecting changes in telemetry trends and comparing trends between different periods of the same project. Software project telemetry avoids many problems inherent in traditional metrics models, such as the need to accumulate a historical project database and ensure that the historical data remain comparable to current and future projects. The claim of this dissertation is that software project telemetry provides an effective approach to 1 automated metrics collection and analysis, and 2 in-process, empirically-guided software development process problem detection and diagnosis. Two empirical studies were carried out to evaluate the claim: The results suggested that software project telemetry had acceptably-low metrics collection and analysis overhead, and that it provided decision-making value at least in the exploratory context of the two studies. In addition, code review software tools help the code review process by providing a more efficient means of collecting and analyzing code review data. On the other hand, software organizations that conduct code reviews often do not utilize these review tools. Instead, most organizations simply use paper or text editors to support their code review processes. Using paper or a text editor is potentially less useful than using a review tool for collecting and analyzing code review data. In this research, I attempted to address the problems of previous code review tools by creating a lightweight and flexible review tool. I believe the Jupiter Code Review Tool is more efficient at collecting and analyzing code review data than the text-based approaches. To investigate this hypothesis, I have constructed a methodology to compare the Jupiter Review Tool to the text-based review approaches. I carried out a case study using both approaches in a software engineering course with 19 students. The results provide some supporting evidence that Jupiter is more useful and more usable than the text-based code review, requires less overhead than the text-based review, and appears to support long-term adoption. The major contributions of this research are the Jupiter design philosophy, the Jupiter Code Review Tool, and the insights from the case study comparing the text-based review to the Jupiter-based review. The students had used Hackystat-UH for approximately six weeks at the time of the evaluation. The survey requests their feedback regarding the installation, configuration, overhead of use, usability, utility, and future use of the Hackystat-UH configuration. As the

Hackystat system has changed significantly since , some of the evaluation questions were changed. The data from this evaluation, in combination with the data from the evaluation, provide an interesting perspective on the past, present, and possible future of Hackystat. Hackystat has increased significantly in functionality since , which has enabled the usage to more closely reflect industrial application, and which has resulted in significantly less overhead with respect to client-side installation. On the other hand, results appear to indicate that this increase in functionality has resulted in a decrease in the usability and utility of the system, due to inadequacies in the server-side user interface. Based upon the data, the report proposes a set of user interface enhancements to address the problems raised by the students, including Ajax-based menus and parameters, workflow based organization of the user interface, real-time display for ongoing project monitoring, annotations, and simplified data exploration facilities. Unfortunately, in order to inspect all of the documents adequately, you estimate that it will take person-hours. However, your manager refuses to increase the budgeted resources for the inspections. How do you decide which documents to inspect and which documents to skip? Unfortunately, the classic definition of inspection does not provide any advice on how to handle this situation. For example, the notion of entry criteria used in Software Inspection determines when documents are ready for inspection rather than if it is needed at all. My research has investigated how to prioritize inspection resources and apply them to areas of the system that need them more. It is commonly assumed that defects are not uniformly distributed across all documents in a system, a relatively small subset of a system accounts for a relatively large proportion of defects. If inspection resources are limited, then it will be more effective to identify and inspect the defect-prone areas. Some of the product and process measures include: In addition, there is some evidence that PRI can provide developers with more information to help determine what documents they should select for inspection. An automated framework for the Goal-Question-Metric paradigm, C. Measurement is essential for assessing actual project progress, establishing baselines and validating the effects of improvement or controlling actions. The work performed in this thesis is based on Hackystat, a fully automated measurement framework for software engineering processes and products. Hackystat is designed to unobtrusively measure a wide range of metrics relevant to software development and collect them in a centralized data repository. Unfortunately, it is not easy to interpret, analyze and visualize the vast data collected by Hackystat in such way that it can effectively be used for software project control. During the course of this work, this extension to Hackystat which is later called hackyCGQM is implemented. Another interesting side-effect of the combination of Hackystat and hackyCGQM is that this system is able to perform fully automated measurement and analysis cycles. This high degree of automation is made possible by limiting the implemented measurement programs to metrics which can be measured automatically, thus sacrificing the ability to use arbitrary metrics. As we observed software development consists of a series of activities such as edit, compilation, testing, debug and deployment etc. All these activities contribute to development stream, which is a collection of software development activities in time order. Development stream can help us replay and reveal software development process at a later time without too much hassle. We developed a system called Zorro to generate and analyze development stream at Collaborative Software Development Laboratory in University of Hawaii. It is built on the top of Hackystat, an in-process automatic metric collection system developed in the CSDL. Hackystat sensors continuously collect development activities and send them to a centralized data store for processing.

Chapter 3 : COMPUTER SCIENCE TECHNICAL REPORT ABSTRACTS

Online Technical Writing: Abstracts An abstract is a summary of a body of information. Sometimes, abstracts are in fact called summaries--sometimes, executive summaries or executive abstracts.

This facility will be a benefit to the performing arts programs at CSU, the students and faculty of CSU, as well as the members of the community. It will allow for the improvement of programs in the area and growth of interest in cultural events. The site of Green Hall will be accessible to both students and the community, and will use the space on campus most efficiently, preserving the green areas. A cable-stayed support system for the roof will allow for a compact facility and an unobstructed view for patrons. In order to achieve the best acoustical results in the main performance hall, we have designed a rectangular hall made of plaster. We have also designed the hall so that the depth under the balcony does not exceed the height of the opening beneath the balcony. The total area of the complex will be 56, square feet split into three levels. The main hall will have a seating capacity of 1, The facility contains necessary rooms to accommodate the performers, and several rooms to make the visit of the patrons more enjoyable. The one thing lacking in this introduction is a good, brief description of their design. The discussion about the benefits, etc. They do a good job of discussing the motivation for their project. I personally like the introduction to end with a brief description of what the remaining portions of the report contain. A little more background and possibly a map would help this discussion. DO NOT assume your reader is as familiar with this as you are. This says, "Map of Campus, circle area represents the site where Green Hall currently stands. And I know the Weber building because I live in it. But the scale is so off, and the reproduction is so bad that they should have made the decision to either find a better original or not used it at all. They should also include an arrow to Green Hall. Part of the problem is that the scale is wrong. It should be blatant. In terms of the placement of this figure, I have several thoughts. The writers put their figures on separate pages within the body of the text. I have no problem with that. It comes after its first reference in the text, which is important. The inappropriate thing is referring to it in the text as "figure 1," and referring it on the paper as figure "2. These figures are labeled "Figures 3. They should not be put together. What I mean by this is they can be on the same page, but Figure 3. The figure numbers should not both be up at the top. I actually like figure numbers underneath the figure, not above the figure. With these figures I again wonder if they were taken from some source not referenced. I think they should be one. This figure is placed at the right location. The key thing with placement in text is to put the figure as close as possible after it is first referenced. This is one of the clues that leads you decide whether you do an appendix or not. And I want to know who did take the photograph because that person needs to be credited. The quality of this reproduction is not very good. It does make their point, which is the tall columns with the cables coming off. This visual also works off the previous two visuals since it represents another way of looking at the particular structure. And anyway you can do that is useful. Schematics allow you to do certain things like add arrows and show load paths. So this had a different function. The other two depicted load paths. This one was trying to give the viewer a big picture of what this looks like. After all, a bridge is difficult to imagine. This table accurately sites its source, "Table based on such and such. Some suggestions are to put "Based on Byronic L Then the table would physically separate the title if I felt there was a title too, separate from the caption. And below is the title on the table. Another alternative would be to "footnote" the table. Not a real footnote, but a footnote within the table. This can be done by using an identifier like a "star. When a figure like this needs to be drawn, you should follow normal conventions for drafting, including dimension lines with arrowheads. If this was to be a conceptual diagram representing, "We now can do a sensitivity D over H," then you might do that. But I think they were trying to show us how big is was. This is not worth a thousand words. A scale should be included here. Also, these should be numbered. Students should indicate how each one works e. Also, is that the Performance Hall in the middle? There are better visual ways of doing that more explicitly, as with international symbols, etc. Also, "E" for "exit" is a little short. These are meant to be schematic floor plans. These serve very well as schematics. They do not serve well as details. But this design is more at the conceptual level, so I understand why they did it. The detail fits the purpose. It really would

have been nice to have put these visuals in the front. A neat way to have done that would have used this as a figure on the title page to introduce the concept right up front. The captions on these are all right. If you put to much lettering on a figure, it gets busy. This is actually a pretty good balance. I understand just about what everything is. But overall, these are pretty good, typical, schematic drawings. Using a different font is a stylistic mistake. Move the label out and put an arrow to it. John Wiley and Sons Inc. Instructor Comments This is a fairly low number of references. Sometimes, you might not have references because much of your text is original work on your part, but then you should include appendices on calculations and such. When deciding to place information in an appendix, ask yourself, "Are there reams and reams of figures that are best put in an appendix or will using a small number of figures integrate better throughout the text? A likely source for appendices is computational results. The best place for these is in appendices.

Chapter 4 : Technical Reports | Style for Students Online

Technical Reports, Executive Summaries, and Abstracts "Technical reports are meant to be skimmed! }{encethefrequent occurrence of executive.

An abstract may act as a stand-alone entity instead of a full paper. Most literature database search engines index only abstracts rather than providing the entire text of the paper. An abstract allows one to sift through copious numbers of papers for ones in which the researcher can have more confidence that they will be relevant to his or her research. Once papers are chosen based on the abstract, they must be read carefully to be evaluated for relevance. It is generally agreed that one must not base reference citations on the abstract alone, but the content of an entire paper. According to the results of a study published in PLOS Medicine , the "exaggerated and inappropriate coverage of research findings in the news media" is ultimately related to inaccurately reporting or over-interpreting research results in many abstract conclusions. An academic abstract typically outlines four elements relevant to the completed work: The research focus i. Abstract length varies by discipline and publisher requirements. Typical length ranges from to words, but very rarely more than a page and occasionally just a few words. Abstracts are typically sectioned logically as an overview of what appears in the paper, with any of the following subheadings: In articles that follow the IMRAD pattern especially original research , but sometimes other article types , structured abstract style is the norm. Abstracts that comprise one paragraph no explicit subheadings are often called unstructured abstracts by publishers. Background Drafting in cetaceans is defined as the transfer of forces between individuals without actual physical contact between them. This behavior has long been surmised to explain how young dolphin calves keep up with their rapidly moving mothers. It has recently been observed that a significant number of calves become permanently separated from their mothers during chases by tuna vessels. A study of the hydrodynamics of drafting, initiated inmechanisms causing the separation of mothers and calves during fishing-related activities, is reported here. Results Quantitative results are shown for the forces and moments around a pair of unequally sized dolphin-like slender bodies. These include two major effects. First, the so-called Bernoulli suction, which stems from the fact that the local pressure drops in areas of high speed, results in an attractive force between mother and calf. Conclusions A theoretical analysis, backed by observations of free-swimming dolphin schools, indicates that hydrodynamic interactions with mothers play an important role in enabling dolphin calves to keep up with rapidly moving adult school members. This is an Open Access article: It is not intended to be as exhaustive a summary as the text abstract, rather it is supposed to indicate the type, scope, and technical coverage of the article at a glance. The use of graphical abstracts has been generally well received by the scientific community. However, the validity of this assumption has not been thoroughly studied, and a recent study statistically comparing publications with or without graphical abstracts with regard to several output parameters reflecting visibility failed to demonstrate an effectiveness of graphical abstracts for attracting attention to scientific publications.

Chapter 5 : Examples of Research Abstracts

An example abstract from an Engineering scientific report A detailed comparison of the properties and microstructures of conventionally sintered and microwave sintered samples of 3 mol% and 8 mol% yttria zirconia was performed.

Courses in Technical Writing An abstract is a summary of a body of information. Sometimes, abstracts are in fact called summariesâ€”sometimes, executive summaries or executive abstracts. The business and scientific worlds define different types of abstracts according to their needs. If you are taking a technical writing course based on this online textbook, your technical report depending on your instructor may use two types: See examples of abstracts as they occur within technical reports. As you can see from the example , it is very shortâ€”usually a brief one- or two-sentence paragraph. In this report design, it appears on the title page. You may have noticed something similar to this type of abstract at the beginning of journal articles. The descriptive abstract does not say something like this: Based on an exhaustive review of currently available products, this report concludes that none of the available grammar-checking software products provides any useful function to writers. This is the style of summarizing you find in the informative abstract. Instead, the descriptive abstract says something like this: This report provides conclusions and recommendations on the grammar-checking software that is currently available. The descriptive abstract is little like a program teaser. Or, to use a different analogy, it is as if the major first-level headings of the table of contents have been rewritten in paragraph format. Descriptive abstract on report title page. Informative Abstracts The informative abstract, as its name implies, provides information from the body of the reportâ€”specifically, the key facts and conclusions. To put it another way, this type of abstract summarizes the key information from every major section in the body of the report. It is as if someone had taken a yellow marker and highlighted all the key points in the body of the report then vaccuumed them up into a one- or two-page document. Of course, then some editing and rewriting would be necessary to make the abstract readable. Specifically, the requirements for the informative abstract are as follows: Summarize the key facts, conclusions, and other important information in the body of the report. Equals about 10 percent of the length of a page report: This ratio stops after about 30 pages, however. For or page reports, the abstract should not go over 2 to 3 pages. Summarize the key information from each of the main sections of the report, and proportionately so a 3-page section of a page report ought to take up about 30 percent of the informative abstract. Phrase information in a very dense, compact way. Sentence are longer than normal and are crammed with information. The abstract tries to compact information down to that percent level or lower for longer reports. Omit introductory explanation, unless that is the focus of the main body of the report. Definitions and other background information are omitted if they are not the major focus of the report. The informative abstract is not an introduction to the subject matter of the reportâ€”and it is not an introduction! Omit citations for source borrowings. If you summarize information that you borrowed from other writers, you do not have to repeat the citation in the informative abstract in other words, no brackets with source numbers and page numbers. Include key statistical detail. One expects to see numerical data in an informative abstract. You should not see phrasing like this: This last point is particularly important. People often confuse the kinds of writing expected in descriptive and informative abstracts. Study the difference between the informative and descriptive phrasing in the following examples: During speech, sound is generated by the vocal cords and by air rushing from the lungs. If the vocal cords vibrate, a voiced sound is produced; otherwise, the sound is unvoiced. The main problem in speech recognition is that no two voices produce their sounds alike and that an individual voice varies in different conditions. Because voices do vary and because words blend together in a continuous stream in natural speech, most recognition systems require that each speaker train the machine to his or her voice and that words have at least one-tenth of a second pause between them. Such a system is called an isolated word recognition system and consists of three major components that process human speech: Spoken words are identified on the basis of a certain decision algorithm, some of which involve dynamic programming, zero crossing rate, linear predictive coding, and the use of a state diagram. Voice recognition systems offer many applications including data entry, freedom for mobility, security uses, telephone access,

and helpful devices for the handicapped. However, these same systems also face problems such as poor recognition accuracy, loss of privacy among those who use them, and limited vocabulary sizes. The goal of the industry is the development of speaker-independent systems that can recognize continuous human speech regardless of the speaker and that can continually improve their vocabulary size and recognition accuracy. This type summarizes the key facts and conclusions in the body of the report. By the way, speech recognition has come a long way since this report was written in ! Executive Summary The executive summary is a hybrid of the descriptive and informative summaries. Written for executives whose focus is business decisions and whose background is not necessarily technical, it focuses on conclusions and recommendations but provides little background, theory, results, or other such detail. Requirements The most important needs of rural health clinics, which require energy resources, are as follows: Absorption refrigeration, fueled by propane or kerosene and common at unelectrified health clinics, is vulnerable to interruption and is thus inadequate for the vaccines needed in immunization programs for dangerous diseases including polio, diptheria, tetanus, pertussis, tuberculosis, measles, yellow fever, and Hepatitus B. Instead, compression-type refrigerators powered by or volt storage batteries and recharged by photovoltaic panels or a small wind turbine can meet these needs. Instead of kerosene lighting, common in unelectrified communities and a known safety hazard and contributor to poor indoor air quality as well, renewable energy technologies can improve lighting in rural health clinics for such important functions as emergency treatment, birthing, maternity care, surgery, and administrative tasks. Health care services and emergency medical treatment, in particular, are greatly facilitated with reliable radio and radio-telephone communications to other health clinics and facilities in the region. Rural health clinics can have reliable two-way regional communication via VHF radio with electricity provided by a single W PV module. Small medical appliances that operate on volt AC electricity require an inverter, which is easily incorporated into wind- or solar-based systems. Solar and wind power can be used to generate high volumes of potable water in tandem with techniques such as ozone treatment, reverse osmosis, photochemical treatment, also known as ultraviolet or UV, disinfection and carbon filters. Ozone treatment is very suitable to solar- or wind-generated power requiring only 0. Clean water can also be provided from deep wells but requires an energy source for pumping significant volumes. Solar or wind power or both generated on site can economically meet the broad range of these needs. Revision Checklist for Abstracts As you reread and revise your abstracts, watch out for problems such as the following: Make sure that the descriptive abstract does not include informative abstract phrasing; make sure that the informative abstract does not include descriptive abstract phrasing. Make sure the descriptive abstract provides an overview of the topics covered in all the major sections of the report. Make sure that the informative abstract summarizes all the major sections of the report. Make sure the informative abstract summarizes all key concepts, conclusions, and facts from the body of the report including key statistical information. Make sure that the informative abstract excludes general, obvious, deadwood information and that the phrasing is compact and concentrated. Make sure that the informative abstract is neither too brief less than 10 percent nor too long more than 15 percent. I would appreciate your thoughts, reactions, criticism regarding this chapter: Information and programs provided by hcexres prismnet.

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Chapter 6 : How to Write an Abstract (with Examples) - wikiHow

This contains abstracts from the Annual Environmental Remediation Sciences Program (ERSP) Principal Investigators (PI) Meeting. The ERSP seeks to advance fundamental science to understand, predict, and mitigate the impacts of environmental contamination from past nuclear weapons production and.

Riordan and Steven E. Pauley Abstracts Abstract Recommendation and Feasibility Reports This chapter has four sections: Planning the Recommendation Report Planning the Feasibility Report Writing the Feasibility Report It also has a planning worksheet, an evaluation worksheet, four examples, five exercises, two web exercises, and seven writing assignments. The section on planning the report has four subsections: Select a format and an organizational principle. Writers must create reports that allow readers to find what they need. The section also introduces a method for devising criteria, an activity that students initially find difficult. The feasibility sample report in this manual illustrates the results of this method. The visual aid section uses a table to illustrate the relationship of visual aid to text. The section on writing the report contains subsections on the following parts of the recommendation report: The introduction section explains four statements: The conclusion section explains the relationship of the conclusions to the body of the report. The section on planning the feasibility report provides much the same material as the respective section on recommendation. The key difference is that feasibility reports determine yes or no for one alternative. Feasibility is a huge category, covering many variations. Sometimes feasibility and recommendation merge, as in architectural reports where a firm investigates all the options and then presents the material to a group for them to decide. So, for instance, the school board could select option A, B, or C depending on finances and political climate. The writers report the feasibility and cost of all three options and the board decides. The section on writing focuses on criteria, though the material explained earlier on devising criteria is not repeated. The sample section shows one way to set up a section to interrelate data and criteria to determine feasibilities. Teaching Suggestions This chapter presents basic information for writing a recommendation report. It will work best if you teach it in conjunction with Chapter 12 or Teach Chapter 15 first, to teach the criteria skills; then teach the format chapters as students write their papers. A recommendation report is a major project in the course. Three to six weeks is a common amount of time to spend on it. It could easily be a term project or a group project, assigned early in the course to provide time for original research. A helpful book is Marya W. Holcombe and Judith K. Orienting Yourself A distinction is made between recommendation and feasibility. Feasibility means choosing between yes and no alternatives. A feasibility report recommends whether or not to start your own small business, or build a plant in Lake Placid, or whatever. Dealing with the Technical Level A problem with either a recommendation or a feasibility project is its technical level. As students do more original work in their major, they naturally will become more involved in terms and concepts of the field. If you are just beginning to teach technical writing, you may want to require a glossary or maybe even an appendix that explains background. Of course, students should be able to make their topics clear to you because explaining technical projects to less knowledgeable readers is a major problem for writers of formal reports. Developing Criteria and Body Sections Developing criteria and constructing body sections need the most attention. You should spend time in class setting up examples and discussing them. Ask the students how they would choose between alternatives. Use common examples like selecting courses or choosing an apartment. Work on all three parts of the criteria, making students try different standards and rankings. Body sections also need attention. Most of them need a visual aid or should be built around a visual aid, as explained in earlier chapters. Require visual aids and, if you have not already done so, teach the chapter on visual aids Chapter 7. In many body sections, the introductions are the longest part. Applying the data to the criteria is a relatively short exercise, as the examples show. Structuring the Project Here is one approach to structuring the project: Requiring a memo on these two concerns is helpful. Then focus on criteria and body sections. Handling criteria is a major intellectual skill taught in this course. Students need practice formulating them and using them to evaluate. I suggest you require a rough draft of at least one section. Then, after the students have worked through the planning aspect of the project, let them write the paper. If you control the process,

you will eliminate a tendency of students to ask endless questions about matters of form while not paying enough attention to matters of content. Dealing with Special Problems If you require all the formal report parts, but the papers are only 15 pages long, you will cause a lot of repetition. In a page paper, that repetition is all right, but in a short paper, the repetition is noticeable, even tedious. Students often react negatively to this condition. I do one of two things: Beginning writers are often confused by having to put the conclusions first. I suspect you will have to explain it at length, perhaps several times. I do not cover conclusions, recommendations, and rationales at length in this chapter because I also treated them in Chapter

Chapter 7 : Examples of abstracts

A design report may include an executive summary aimed at your boss, who may need to decide whether or not to use your design, and also an abstract for your peers or other engineers who may need to thoroughly understand the design.

Audiences use these summaries to determine: Whether or not the document is relevant What the main conclusions of the document are What they share: These summaries are both stand-alone documents, meaning that they should be thought of as being independent from the report. In other words, the readers of your summary may not read the report; it also means that the readers of the report may not have read your summary. Practically speaking, this means that the documents are purely summary: However, you should not cut and paste from your report; some readers will read both, and will recognize copied sentences. They should contain all key elements of the report. The audience for an executive summary is precisely what the name indicates â€" executives and managers; the audience for the abstract is usually a more technical reader. A design report may include an executive summary aimed at your boss, who may need to decide whether or not to use your design, and also an abstract for your peers or other engineers who may need to thoroughly understand the design. As audience changes, the content and focus of the summary changes as well: Problem especially financial aspects , Recs esp. Less technical, more financial Language: Technical, less background Length: Often longer than abstract to reflect different focus, need for background and higher likelihood that readers will only read this summary Length: Less than a page, usually one paragraph long See Abstracts and Executive Summaries iWrite Site and below for examples and commentary. Abstract 1 At this time, power utilities major techniques of monitoring their distribution systems are after-the-fact indicators such as interruption reports, meter readings, and trouble alarms. This abstract almost demonstrates almost a sentence-component correspondence. Executive Summary 1 Presently, we monitor our distribution system using after-the-fact indicators such as interruption reports, meter readings, and trouble alarms. Adjusted from Crowe, , cited in [1] Commentary: This ES is slightly longer than the abstract above, and adds key details in the following areas: In essence, it provides a more detailed argument for the recommendation by identifying the monetary cost of the problem and comparing it to the solution. It removes some details about the technology packet switching technology â€" sentence 4 above that may be foreign to non-technical readers.

Chapter 8 : Example Technical Report

CMU-CS Algorithms for Fair Division. David Kurokawa. July Ph.D. Thesis. CMU-CSpdf. Keywords: Algorithmic game theory, fair division, mechanism.

Abstracts An abstract is a summary of a body of information. Sometimes, abstracts are in fact called summaries--sometimes, executive summaries or executive abstracts. Students enrolled in the Online Technical Writing are encouraged to take the reading quiz on this chapter. Anybody else is welcome to try it as well. In this report design, it appears on the title page. You may have noticed something similar to this type of abstract at the beginning of journal articles. The descriptive abstract does not say something like this: Based on an exhaustive review of currently available products, this report concludes that none of the available grammar-checking software products provides any useful function to writers. This is the style of summarizing you find in the informative abstract. Instead, the descriptive abstract says something like this: This report provides conclusions and recommendations on the grammar-checking software that is currently available. The descriptive abstract is little like a program teaser. Or, to use a different analogy, it like major first-level headings of the table of contents have been rewritten in paragraph format. Descriptive abstract on report title page. To put it another way, this type of abstract summarizes the key information from every major section in the body of the report. It is as if someone had taken a yellow marker and highlighted all the key points in the body of the report then vaccuumed them up into a one- or two-page document. Of course, then some editing and rewriting would be necessary to make the abstract readable. Specifically, the requirements for the informative abstract are as follows: Summarizes the key facts, conclusions, and other important information in the body of the report. Usually about 10 percent of the length of the full report: This ratio stops after about 30 pages, however. For or page reports, the abstract should not go over 3 to 4 pages. Summarizes the key information from each of the main sections of the report, and proportionately so a 3-page section of a page report ought to take up about 30 percent of the informative abstract. Phrases information in a very dense, compact way. Sentence are longer than normal and are crammed with information. The abstract tries to compact information down to that percent level. However, do not omit normal words such as the, a, and an. Omits introductory explanation, unless that is the focus of the main body of the report. Definitions and other background information are omitted if they are not the major focus of the report. Omits citations for source borrowings. If you summarize information that you borrowed from other writers, you do not have to repeat the citation in the informative abstract in other words, no brackets with source numbers and page numbers. Includes key statistical detail. One expects to see numerical data in an informative abstract. You should not see phrasing like this: This last point is particularly important. People often confuse the kinds of writing expected in descriptive and informative abstracts. Study the difference between the informative and descriptive phrasing in the following examples: During speech, sound is generated by the vo cal cords and by air rushing from the lungs. If the vocal cords vibrate, a voiced sound is produced; otherwise, the sound is unvoiced. The main problem in speech recognition is that no two voices produce their sounds alike and that an individual voice varies in different conditions. Because voices do vary and because words blend together in a continuous stream in natural speech, most recognition systems require that each speaker train the machine to his or her voice and that words have at least one-tenth of a second pause between them. Such a system is called an isolated word recognition system and con sists of three major components that process human speech: Spoken words are identified on the basis of a certain decision algorithm, some of which involve dynamic programming, zero crossing rate, linear pre- dictive coding, and the use of state diagram. Voice recognition systems offer many applications including data entry, freedom for mobility, security uses, telephone access, and helpful devices for the handicapped. However, these same systems also face problems such as poor recognition accuracy, loss of privacy among those who use them, and limited vocabulary sizes. The goal of the industry is the development of speaker-independent systems that can recognize continuous human speech regardless of the speaker and that can continually improve their vo- cabulary size and recognition accuracy. By the way, speech recognition has come a long way since this report was written in ! Revision Checklist for Abstracts As you

reread and revise your abstracts, watch out for problems such as the following: Make sure that the descriptive abstract does not include informative abstract phrasing; make sure that the informative abstract does not include descriptive abstract phrasing. Make sure that the informative abstract summarizes all the major sections of the report. Make sure the informative abstract summarizes all key concepts, conclusions, and facts from the body of the report including key statistical information. Make sure that the informative abstract excludes general, obvious, deadwood information and that the phrasing is compact and concentrated. Make sure that the informative abstract is neither too brief less than 10 percent nor too long more than 15 percent. Return to the table of contents for the Online Technical Writing Course Guide the online textbook for online technical communication courses at Austin Community College and other institutions worldwide. This information is provided and maintained by David A. For information on use, customization, or copies, e-mail hcexres io.

Chapter 9 : Professional, Technical Writing Introduction // Purdue Writing Lab

An abstract is a brief overview of the key points of an article, report, thesis, or www.nxgvision.comoned at the head of a paper, the abstract is usually "the first thing that individuals read and, as such, decide whether to continue reading" the article or report, wrote Dan W. Butin in his book "The Education Dissertation.".

Riordan and Steven E. Pauley Abstracts Abstract Memorandums and Informal Reports This chapter contains three sections and one focus box: The elements of memos section explains to, from, and subject lines; pagination; and heads; it also presents a short memo report. The elements of informal reports section has several subsections. The introduction subsection explains four ways to introduce a short report: Alert the reader to a problem. Provide an expanded context. The introduction that states an objective is usually one sentence long. The introduction that states context contains four statements: The introduction that alerts a reader to a problem contains three statements: Sample introductions illustrate all methods. The expanded context subsection briefly explains summaries, background, conclusions and recommendations, and discussion sections. The method of organizing and presenting is based on industry models, one of which is included as a chapter model. The section on types of informal format explains four types of reports: IMRD progress outline Each section has a model and brief commentary on what to include in the particular type. Teaching Suggestions This key chapter teaches the informal report, the most important format for the beginning report writer. He or she will repeatedly encounter this format on the job. Helping Students with the Form The memo section explains memo format, pagination, and heads. Many students are surprised to learn that there is more to memo format than the "speed memo" sheet. Focus your students on the section covering elements of informal reports. The overall pattern of presentation and the specific patterns for introductions and discussions are common in industry. The informal report form will accommodate reporting data, recommending, and proposing. Essentially this form has a brief introduction, a summary, and a body called "discussion. Mathes and Dwight Stevenson New York: The summary is a miniaturization of the body. For each point in the body, the summary has a corresponding point. If the report is brief enough, the summary can be deleted. The discussion section is the body, subdivided into as many sections as necessary. Developing Awareness of the Four Types The section on the types of informal reports contains brief descriptions and models of four common informal report types. You could teach each form, spending about a week on each, or you can choose just one or two. Each type requires a definite rhetorical situation. The students can often adapt previous experiences to the requirements of these types. The IMRD report explains the results and significance of an action. Familiar to many students as a "lab report," this genre is extremely useful in nearly any situation, as the models in the chapter and at the end of the chapter illustrate. In the chapter, they show the results of brief surveys; at the end of the chapter, they show the results of "projects" on the Internet. I have used this genre successfully as the basis for the entire class, requiring all action reported in this form. The form helps students find a relationship between their acts say, to learn the Internet and their writing. The writing makes the results clear to the community. Although lab reports are often difficult to use because of the need for lab actions, the freer version of IMRD format shown here can be used with any action you assign. A major problem with using this type of report in the class is the content, which must come from another class. I suggest you ask lab teachers in other disciplines for sample copies, all of which will follow the basic scientific report method of introduction, materials and methods, results, discussion. You could easily relate the form to many journal articles that use it. Brief analysis reports need a short introduction, sometimes a list of conclusions, recommendations, and a brief discussion, usually with a visual aid. The brief feasibility report given here illustrates all these aspects. Note the two-column arrangement for handling the visual aid. The general principles of structure illustrated here can be used in many situations. Progress reports are another common industry form, if not the most common. Although the exact form varies from site to site, the basic concept structure is to report what is finished, what is left to do, and what the problems are. This report requires students to define the categories of discussion appropriate for their audience. The easiest way to teach progress reports is to require them at intervals during a longer project in your course. The outline report, another

common form following what seems to be a general move away from paragraphing , allows a writer to present a lot of information quickly. The text is minimal.