

JTRP Computer Program Policy (amended January 1, 2006)

This policy will be effective starting February 23, 2006 with new JTRP projects approved after this date. Current projects will comply with the previous policy. These policies apply to all JTRP products and to any JTRP project that produces a computer program used in implementation by the Business Information and Technology Systems (BITS) Division or JTRP. This policy supersedes the requirements found in Section 4.2.1 part 6 of the August 1999 User's Manual for Research and Implementation. All computer programs developed for commercial use are copyrighted by the provisions found in Section 4.3 of the User's Manual for Research and Implementation.

1. **Program Development Plan:** The research proposal must include a section entitled "Computer Program Development" that describes the following:
 - a. Software used to develop the program. It must comply with software supported by INDOT, which currently includes:
 - MS Products(e.g. Visual Basic 6.0, Visual Studio.Net, Office, FrontPage, MS Project, etc.).
 - Databases - Oracle Database 10 g (Release 2), Access
 - PowerBuilder, release 10.0
 - C & C++
 - Adobe Acrobat
 - Flash
 - ESRI Products

If proposed development software is not included in the above list, it must be approved by the JTRP Information Technology Administrator (ITA) and the BITS SAC member. Software used to develop the application should set the requirements for the use of the application. For example, a licensed copy of FrontPage 2000 describes minimum hardware and operating system requirements. The INDOT proponent of the software should identify their PC configuration, to allow for possible upgrades before the software is delivered. The SAC should confirm the base software specific release number requirements before proceeding with the project proposal.

- b. Hardware required to operate the program (INTEL based). This includes required (INTEL based) memory, storage space, required monitor size, operating environment (Internet, Intranet, LAN, WAN, stand-a-lone) and operating system, confirmed by the BITS SAC member.
- c. Hardware interface Operating System must be windows based. Current version, i.e.: 2000, NT, XP.
- d. User interface description. A "windows type" oriented interface is recommended. This includes program input and output. Printed output is a necessary requirement and its format must be approved by BITS SAC member and the JTRP ITA.
- e. Network Environment must be TCP/IP based
- f. All web applications are to be designed for Microsoft Server and

Internet Explorer 6.0.

- g. Exceptions to the requirements in this section can be requested through the JTRP ITA.
2. **Approval Phases:** Computer program development must pass through the following checkpoints during the design and development.
- a. *Proposal stage:* Every project that develops a computer program that INDOT will support and maintain will have a section in the proposal titled Computer Program Development. Requirements are described above. The project SAC must include BITS membership. This proposal section must be reviewed and approved by the SAC and the JTRP ITA before the JTRP Board presentation. The JTRP ITA will review proposed development tools, required hardware, required operating system, and required budget. The project work plan must have tasks for prototype development and program completion. Each of these tasks will have a separate budget. The proposal will also include a description on how the acquired hardware and software will be disposed at the conclusion of the project.
 - b. *Provisional INDOT IT approval:* If the project is given provisional approval by JTRP, the proposal shall be submitted to the Deputy Commissioner for Business Information and Technology Systems. The Deputy Commissioner will review the project proposal and submit a recommendation to the INDOT IT Council regarding the project's consistency with the INDOT IT and Business Plans. All projects involving computer program development must be approved by the IT Council prior to the start of the project (This approval can be by BITS discretion).
 - c. *Prototype review:* At this stage the computer program will be reviewed by the SAC and the JTRP ITA. The review will inspect for compliance with the original proposal, user interface design, program output, adequate and proper program documentation, and prototype execution. Approval must be granted by the BITS SAC member and the JTRP ITA before the program completion task can start.
 - d. *Final review:* At the time of draft final report submission, the computer program will be reviewed and agreed upon by the members of the SAC and the JTRP ITA. Technical computer issues raised will be resolved jointly with the INDOT BITS Division before submission to the JTRP board. A user's manual for the program also is to be prepared and submitted at this time, source code must be included. The review will evaluate the program's user interface, output capabilities, and documentation; the ability to operate on INDOT-supported hardware and networks; and the clarity of the user's manual. JTRP ITA approval of the foregoing elements of the program is a requirement for project completion.

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