# ISO 29148:2018 Software Requirements Specification for Traveller Character Sheet Application

**1. Introduction**

**1.1 Purpose**

This document specifies the requirements for the Traveller 2nd Edition Character Sheet web application, which provides an interactive digital character sheet for the Mongoose Traveller 2nd Edition role-playing game.

**1.2 Scope**

The Traveller Character Sheet application allows users to create, manage, save, and print character information for the Traveller role-playing game. It includes functionality for tracking character skills, careers, equipment, and finances in accordance with the game's rules.

**1.3 Stakeholders**

* Primary users: Players and Game Masters of Traveller role-playing game
* System administrators: Website administrator
* Content providers: Traveller game publishers (indirectly)

**1.4 Document Conventions**

This specification follows ISO 29148:2018 requirements structuring.

**2. Overall Description**

**2.1 Product Perspective**

The Traveller Character Sheet is a standalone web application that operates within a web browser and uses local storage for data persistence. It does not require server connectivity after initial page load.

**2.2 Product Functions**

* Character creation and management
* Skill and characteristic tracking
* Career history recording
* Equipment and finances management
* Character data storage and retrieval
* Dice rolling for game mechanics
* Character data export and import

**2.3 User Characteristics**

Users are expected to be familiar with the Traveller role-playing game rules and terminology. Technical expertise required is minimal beyond basic web browsing capabilities.

**2.4 Operating Environment**

* Web browsers: Modern browsers with JavaScript and localStorage support
* Platforms: Desktop and tablet devices
* Dependencies: Bootstrap 5.3, no server-side requirements

**2.5 Design and Implementation Constraints**

* Browser-only functionality with no server-side processing
* Data storage limited to localStorage capacity
* Print formatting requirements for physical character sheets

**3. Specific Requirements**

**3.1 Functional Requirements**

**3.1.1 Character Data Management**

**REQ-01**: The system shall allow users to input and modify basic character information (name, species, age).  
**REQ-02**: The system shall enable users to record character characteristics with both current and baseline values.  
**REQ-03**: The system shall automatically calculate characteristic modifiers based on characteristic values.

**3.1.2 Character Career Management**

**REQ-04**: The system shall allow users to add pre-career education options with associated years, outcomes, and benefits.  
**REQ-05**: The system shall enable recording of career history including assignments, promotions, years of service, and benefits.  
**REQ-06**: The system shall automatically suggest appropriate rank titles based on career and promotion count.  
**REQ-07**: The system shall calculate biological age based on pre-career and career years.

**3.1.3 Character Skills**

**REQ-08**: The system shall provide a comprehensive catalog of skills from the Traveller rule system.  
**REQ-09**: The system shall support skill specializations when applicable to specific skills.  
**REQ-10**: The system shall allow recording skills in training with time tracking.  
**REQ-11**: The system shall handle specialized skill requirements such as mandatory specialization tracking.

**3.1.4 Equipment, Weapons, and Finances**

**REQ-12**: The system shall allow recording of weapons with relevant combat statistics.  
**REQ-13**: The system shall allow recording of armor with protection values.  
**REQ-14**: The system shall allow recording of general equipment with specifications.  
**REQ-15**: The system shall track financial information including credits, pension, debt, and regular expenses.

**3.1.5 Data Persistence**

**REQ-16**: The system shall save all character data to browser localStorage.  
**REQ-17**: The system shall allow exporting character data to JSON files.  
**REQ-18**: The system shall allow importing character data from previously exported JSON files.  
**REQ-19**: The system shall provide ability to delete saved character data.

**3.1.6 Game Utility Features**

**REQ-20**: The system shall provide dice rolling functionality for common Traveller dice mechanics.  
**REQ-21**: The system shall support task resolution rolls with difficulty levels.  
**REQ-22**: The system shall generate printable character sheets.

**3.2 External Interface Requirements**

**3.2.1 User Interfaces**

**REQ-23**: The user interface shall be organized in thematic sections with clear headers.  
**REQ-24**: The system shall use form controls appropriate to data types (dropdowns for selections, numeric inputs for values).  
**REQ-25**: The system shall hide utility functions when printing character sheets.

**3.2.2 Hardware Interfaces**

**REQ-26**: The system shall support standard input devices (keyboard, mouse, touch).

**3.2.3 Software Interfaces**

**REQ-27**: The system shall interact with browser localStorage API for data persistence.  
**REQ-28**: The system shall interact with browser's file system API for import/export operations.

**3.3 Quality Attributes**

**3.3.1 Usability**

**REQ-29**: The system shall provide autocomplete functionality for skill selection.  
**REQ-30**: The system shall provide dynamic updating of calculated fields when input values change.

**3.3.2 Performance**

**REQ-31**: The system shall load completely within 5 seconds on standard broadband connections.  
**REQ-32**: The system shall respond to user input within 0.5 seconds.

**3.3.3 Reliability**

**REQ-33**: The system shall validate user inputs to prevent invalid data entry.  
**REQ-34**: The system shall provide feedback when data operations succeed or fail.

**3.3.4 Portability**

**REQ-35**: The system shall function on all major modern browsers (Chrome, Firefox, Safari, Edge).  
**REQ-36**: The system shall use responsive design for multiple device sizes.

**4. Verification**

**4.1 Verification Approach**

Requirements shall be verified through:

* Manual testing of all user interface components
* Validation of calculations against Traveller rule examples
* Cross-browser testing for compatibility
* Usability testing with target users

**4.2 Traceability**

**TR-01**: User interface elements shall be traceable to specific functional requirements.  
**TR-02**: Data persistence operations shall be fully traceable through browser dev tools.  
**TR-03**: Calculation functions shall be documented with references to relevant game rules.

**5. Appendices**

**5.1 Data Dictionary**

* Character: Primary data entity representing a player character
* Characteristic: Core abilities (STR, DEX, END, INT, EDU, SOC, etc.)
* Skill: Character capabilities with associated proficiency levels
* Career: Professional background with assignments and ranks
* Equipment: Items in character possession

**5.2 Glossary**

* DM: Dice Modifier
* UPP: Universal Personality Profile
* TL: Technology Level