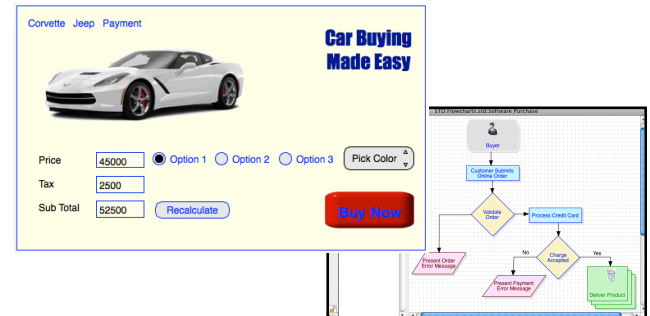


MacA&D

System Models & Simulation
Requirements Management
Software & Database Design
Code Generation & Reengineering
Team Development & Reports
Business Process Models
Screen Prototypes & Flowcharts

Screen Prototypes & Flowcharts

Draw screens, add behavior and browse the user experience for desktop and mobile applications or websites. Flowchart any business or technical process.



UML

Design object-oriented software with UML. Package and Class diagrams show class structure. A Use Case diagram identifies the system boundary and use cases, while textual descriptions capture the details. Statecharts define specific states of a system and events that cause state transitions.

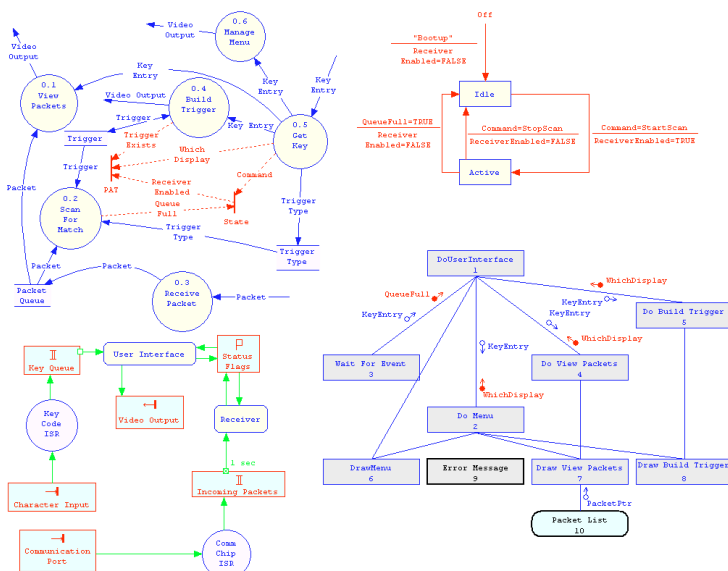
Show object interactions with Communication or Sequence diagrams. Indicate parallel behavior with Activity diagrams. A Deployment diagram illustrates the physical relationships between hardware and software components in the delivered system.

Design your database system with logical and physical data models. Rich data models represent tables, views, constraints, assertions, triggers, indexes, procedures and other SQL elements. Generate the SQL schema code for popular RDBMS products like Oracle, SQL Server, DB2, Sybase, Informix and InterBase.

System Models & Simulation

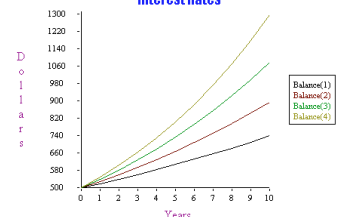
MacA&D makes it easy to model dynamic systems with Causal Loop Diagrams. Parameterize the model with data and equations, run time simulations and present the system behavior with live charts, graphs and tables.

Data files can provide input data to models or capture output results. Use the integrated Data File editor to edit data items and import or export to a spreadsheet, database or charting application.



Year	Earned Interest	Deposit	Withdrawal	Income Tax	Bank Account
0	0	0	0	0	500.00
1	50.00	0	0	0.00	550.00
2	55.00	0	0	0.00	605.00
3	60.50	0	0	0.00	665.50
4	66.55	0	0	0.00	732.05
5	73.21	0	0	0.00	805.26
6	80.53	0	0	0.00	885.79
7	88.58	0	0	0.00	974.37
8	97.44	0	0	0.00	1071.81
9	107.18	0	0	0.00	1178.99
10	117.90	0	0	0.00	1296.89

Balance for Various Interest Rates



Structured Analysis & Design

Structured analysis and design has been the foundation of multi-tasking, real-time system development for many years. Data and control flow diagrams show the flow of information through a system. State diagrams and tables identify modes of operation and event handling.

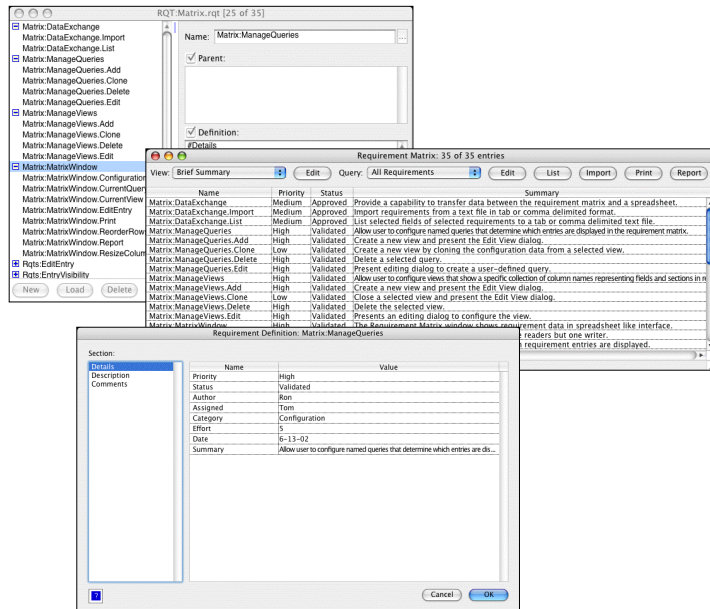
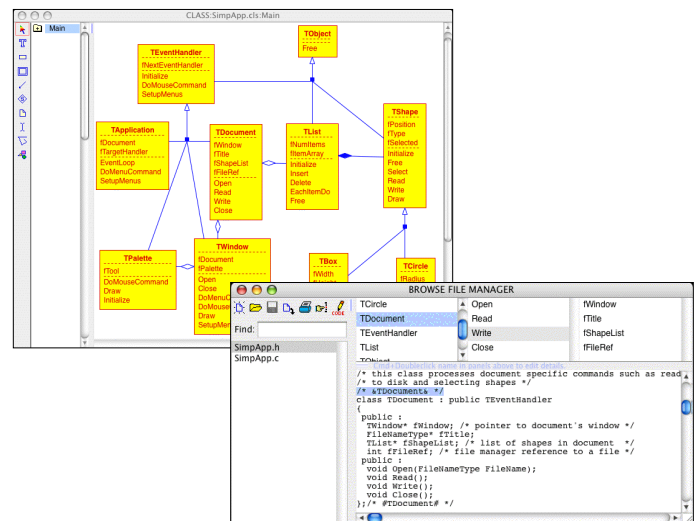
Task diagrams illustrate threads of execution (tasks and ISRs) and the operating system services (event flags, queues and semaphores) that connect them. Structure charts highlight call structure between functions in each task.

Requirements Management

Requirements drive the entire development process. MacA&D offers an integrated solution for managing requirements with capabilities to identify, specify, group, track, control and use requirements.

With user-defined definition templates, capture a structured collection of fields for each requirement entry like Status, Priority, Author, Date, Assigned, Category, Effort, Summary and Description. The Matrix window presents this information with custom views and queries.

A collection of column names defines a view, while a query specifies a collection of rows. System analysts, designers, programmers, managers, product testers and others involved in the development process all use system and product requirements but in very different ways. Views and queries satisfy each user's specific need.



Code Generation & Reengineering

From a comprehensive modeling environment, create code for object-oriented, procedural or database designs. From class diagrams, generate C++, Objective-C, Java, Delphi, Xojo or PHP code with class declarations and empty function frames. From a structure chart, generate function and procedure frames for C, Pascal, Basic, PHP or Fortran. From a data model, generate the SQL schema.

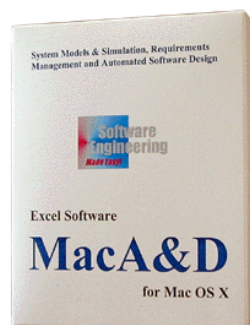
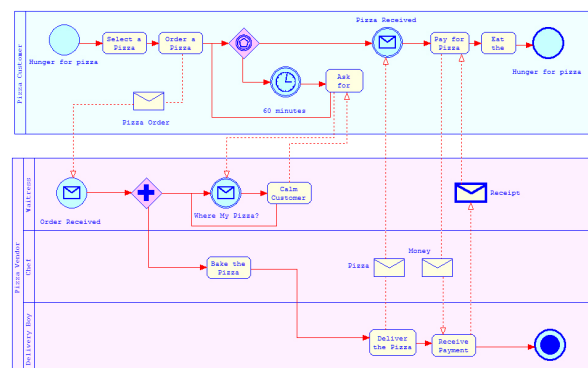
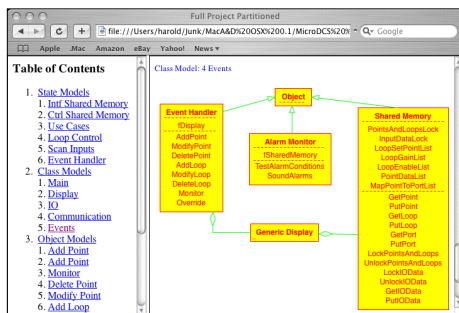
MacTranslator scans source code to extract design information. That data is imported into MacA&D to generate class, structure and data models. Models can be partitioned into multiple diagrams to document software systems of any size with minimal human effort.

Business Process Models & Project Reports

MacA&D supports Business Process Model Notation with Collaboration, Process, Choreography and Conversation diagrams. Integrate BPMN with dictionary, requirements and other models.

All models support verification, balancing, import and export features to check for errors and share work between users, development tools and platforms. The built-in report generator comes with many standard reports to view project information or requirements traceability using a standard HTML browser or word processor.

The scriptable report generator makes it easy to create custom reports with full control over content and format. Every diagram, table, requirement, text specification or piece of data is accessible to your report. A script can add new features and interact with the user through menu commands and dialogs.



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