Cris

Cris Overview
The Radiology Information Solution

Magentus

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System Overview

Magentus's Cris (Computerised Radiology Information System) is the most widely used RIS in the UK, developed over 30 years in close collaboration with our radiology customers.

The key features of Cris functionality are:

- Easy to use
- Secure and robust
- Functionally rich
- Full integration with other hospital systems

Cris is central to many efficient Radiology departments and supports all of the latest Radiology innovations of recent years.

The system has a user-friendly interface, complete with context sensitive help, hover help, pop-up lists and concise prompts to guide the user through any operation. Default data fields are used to minimise repetitive entry.

The system offers JDBC and SQL access, and allows connectivity to Microsoft Excel and third party report writers.

Cris can be interfaced to any PAS, OCS, PACS, DICOM modality and GP Links using standard interfaces. Digital Dictation, Speech Recognition and Request Card Digitisation are also fully integrated.
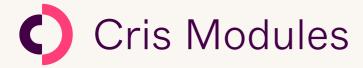
Functional application specification

Cris is a workflow driven system providing users with the ability to control how the system appears and behaves based on the appropriate workflow pattern for each type of user. This means that in most cases each appropriate screen appears automatically, and each required button is highlighted automatically. The system is primarily keyboard driven, although the mouse can of course also be utilised as and when required by the user. Optionally, Voice Recognition (VR) can also be used to control the interface.

This ensures that that in most cases users are automatically presented with appropriate screens for the tasks they are currently undertaking, rather than having to choose these manually – although the user still has full control over system functionality and can easily deviate to other areas as and when required.

Cris Modules

Cris is supplied with the following modules as standard;

- Appointments (core)
- Reception (core)
- Clinical Reporting (core)
- Statistics (core)
- Film Tracking (core)
- Post Examination (core)
- Launcher (core)
- Document Scanning (core)
- Widgets Bundle (core)
- Digital Dictation Module (core)
- Vetting Module (core)
- Resources Module (included)
- Sessions Module (included)
- Messaging Module (included)
- Nuclear Medicine Module (included)
- Portering Module (included)
- Communicator (included)
- IEP Interface and Integration (included)
- Obstetric Ultrasound (included)
- Cris Analytics Standard

Modules marked as "core" are typically activated and trained as standard; modules marked as "included" can be activated and trained on where required but may attract a nominal charge to cover implementation.

In addition, the following modules are available as optional extras;

- Integrated VR (Scribetech Augnito)
- Foetal Anomaly Module (graphs, data & images)
- FASP Forms (Foetal Anomaly Screening Programme)
- PET-CT system
- Magentus / Savience Self Service Kiosk (Wall or Desk Model)
- Medical Photography
- DEXA
- Research Studies
- Billing
- Mobile Cris
- Cris Analytics Pro

A brief description of each module is provided below. For further details please contact the Magentus Sales Department on 01623 48 98 25 or email **UK-Sales@Magentus.com**

Cris Modules – Summary

Appointments (core)

- The system can automatically identify the next suitable appointment for the procedure, and control when the appointment can be booked. Alternatively, the user can select a specific date and time either manually, or by using the 'drag and drop' utility which is incorporated into the Cris diary viewer. This functionality is defined by the user's security access to the system and can be changed by the system administration at any time. The diary for the room is displayed on the screen, and if the appointment time is not considered suitable, the system can suggest the next available appointment.

- The room diaries are completely user definable and can be amended at any time, along with the default details for each procedure, like permissible rooms and days of the week for booking. A full history of changes for each appointment is maintained, along with reasons for change or cancellation.

Reception (core)

- Cris holds its own Patient Master Index (PMI) which can be queried using Hospital number, name, sounds like name "soundex", date of birth and NHS / CHI number, as well as PAS search (if interfaced), when these key fields are entered.

- If a PAS interface exists, demographic details are passed to Cris, negating the need for the operator to re-enter them. Patient Alarms/Alerts allows users to associate an alarm or warning against a patient. For example; Contrast Reactions or diabetes. Users can view all historic amendments to the patient history.

Clinical Reporting (core)

- This part of the system is used to enter, amend, verify, view and print the clinical report for the examination. The report editor is designed specifically to complement the way a department works such as inserting standard phrases into the text, macros, auto-report features, and viewing previous reports without leaving the editor. Most standard word processing features and keyboard shortcuts are available in addition to basic spell checking and a comprehensive Radiological spell checker.

- The user can define the layout of the printed report and the number of copies, as well as when it can be printed, e.g. only after the report has been verified. Reports can be printed on completion of entry or 'batch printed' at a later stage after verification.

- Individual reports can be verified at any time and a Radiologist may select all of their reports within a date range, and each report will be presented on screen to be read. The Radiologist may then make a decision to verify, amend or suspend each report as appropriate.

- Dual reporting and verification allows student radiologists/radiographers to dictate and verify their own reports, prior to the report being sent to the verification queue of a senior radiologist/radiographer for final approval.

- Disease indexing allows users to create and maintain a disease index such as ACR, READ, SNOMED CT and local diagnostic codes against each attendance. Users will also be able to report upon such diagnoses. Museum coding is also fully supported.

Cris Modules – Summary

Statistics (core)

- The system has a comprehensive standard set of statistical reports pre-defined to allow users to create statistical output to assist in the management of a busy radiology department. The stats module includes all standard returns required by the NHS.

- The statistics module allows users to save previously run queries and their output to allow future use or manipulation of the data.

- The statistical report engine is able to provide outputs in a variety of styles to facilitate import into third party data manipulation tools (i.e. Excel/Access).

Film Tracking (core)

- Although no longer widely used, the Cris application has the ability to allow for multiple volumes (bags/packets), and volume types (Radiology, Mammography, Ultrasound, No films etc), which in practice means that it is possible for each patient to have a main radiology volume (bag/packet), and main volume (bag/packet) for any other department/modality, as well as any number of temporary volumes (bags/packets) as required.

Post examination (core)

- The Cris application is a Patient-based information system, and it is therefore possible to complete a patient's post processing details (Room, Radiographer, Dosage, Films etc). The Cris Post processing module is designed to facilitate the data requirements of all radiology modalities.

Launcher (core)

- Cris utilises Java™ technology and this module allows Cris to function correctly even when other, possibly incompatible, versions of Java™ are installed on local workstations.

Document Scanning (core)

- This allows any scanned image to be stored against a patient and viewed as required.

- Please note that although there is no charge for scanning licenses, consideration needs to be given to the number and type of scanners used. A large number of additional scanners, especially those that scan in high resolution may reduce the performance of the system. In addition, consideration should be given to any anticipated increase in storage required by using additional scanners. Please check with Magentus before adding additional scanners so that impact can be assessed, particularly if storage space is managed by Magentus.

Widgets Bundle (core)

- This module provides several standard lists available with a single mouse click.

  Examples include:

  - Day List
  - Appointments List
  - Unprocessed List
  - Reporting Work list
  - Waiting List
  - Porters List
  - Dictation List
  - Orders List
  - Vetting List
  - Sessions List (MDT management and User defined Work lists)

Cris Modules – Summary

Digital Dictation Module (core)

- Although replaced by Voice Recognition in many Trusts, this module means that Reporting Clinicians and Secretaries/Typists are no longer tied to a physical location so dictation and transcription of reports can take place anywhere in the Trust. This is because the dictated report is held directly against the patient attendance. When the clinician finishes dictating, the report is immediately accessible by any secretary/typist for transcription, at any location in the Trust.

Vetting Module (core)

- ·This module allows clinicians to electronically vet requests at any stage in the appointment workflow, facilitating direct booking. Additional clinical information and protocol details can be added to each event. This is a major step towards achieving a paperless workflow.

Resources Module (included)

- The Resources Module records staff and equipment availability. It allows essential resources to be assigned to examinations to enable an accurate, paperless system.

Sessions Module (included)

- An efficient way of managing MDT (Multi Discipline Team) and clinical meetings, reporting work lists and teaching sessions, recording attendees, collating patient attendances, recording pre and post meeting actions, notes and outcomes. Full access to the patient event history and PACS desktop integration are available.

Messaging Module (included)

- The Messaging Module allows users to message other users within Cris as well as attach messages to specific patients or events.

Nuclear Medicine Module (included)

- This module allows users to manage all aspects of a nuclear medicine department. The system allows users to accept NM isotopes in Vial or Syringe format. The system keeps a running decay total on each item booked into the department to ensure that users are kept aware of the current activity within the isotope store. The system then allows users to sub-divide vials into individual patient syringes which may then be administered to each patient.

Portering Module (included)

- The Cris Portering system has been designed to allow radiology users to request porters throughout the system as and when required and to provide a one-stop screen for the porters themselves to use in order to determine which patients need collecting or returning, and to allow radiology users to establish the current status for each patient (i.e. porter is en-route to the ward to collect the patient, or has now returned the patient etc.)

Cris Modules – Summary

Communicator (licence included) (hardware & implementation, if required - not included)

- Communicator sends text messages and emails for appointment reminders, results ready and abnormal results flagging to the referring Clinician as per NPSA16 (National Patient Safety Announcement).

- The communicator module facilitates rapid communication between department, patient and referrer. The reduction in DNA rates by the simple use of SMS reminders to patients is well documented. The improvements in patient care and ensuring that a diagnosis is "acted upon" by referring clinicians is also well documented.

- Communicator is also able to send SMS messages and emails from NON Cris messages. The system is able to receive patient lists from other systems via text files or HL7 messages and can generate SMS messages and emails as required.

IEP Interface and Integration (included)

- This enables users to control IEP from within Cris, providing IEP infrastructure is in place.

Obstetric Ultrasound (no customisation of existing forms) (included)

- This part of the system is used to enter, amend, view and print the clinical report for Obstetric Ultrasound examinations. Report formats are based on the required combination of the Foetal dimensions, growth chart and free text report. Some of the scans which are currently available and are automatically displayed dependent upon the procedure code in the request record include: Early, Growth, Detailed, Anatomy, Anomaly

- The system also has a comprehensive Foetal anomaly system (see below) which is available as an additional option in order to capture detailed anomaly data.

Optional Modules

Integrated Voice Recognition (VR)

Cris is fully integrated with Scribetech Augnito. This allows users control over many aspects of the system without using the keyboard or mouse.

Foetal Anomaly Module (graphs, data & images)

Allows reporting templates to be assigned to relevant Ultrasound Obstetric examinations to aid with reporting. This information is then graphically displayed on the report screen.

FASP Forms (Foetal Anomaly Screening Programme)

Specific reporting templates set to new FASP guidelines, which can be assigned to relevant Ultrasound Obstetric examinations to aid with reporting.
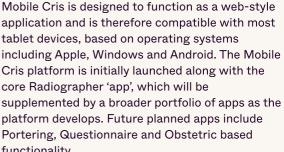
PET-CT system

Pre-booking questionnaires and separate reporting soft forms to aid PET-CT workflow.

DEXA

Pre-booking questionnaires and separate reporting soft forms to aid DEXA examination workflow.

Magentus / Savience Self Service Kiosk (Wall, Desk or Floor Model)

Using an innovative touch screen, patients can check-in without needing to wait for a free receptionist, receive "Where to next" instructions and continue the patient journey with maximum efficiency. This significantly helps to reduce the burden on the reception staff because most appointed patients are able to bypass the main desk and check-in by themselves.

Medical Photography

Allows users to store Medical photographs on the system, which can be displayed on the report screen for reference to aid with reporting.

Research Studies

Allows users to gather extra information on research patients via soft form templates, this information can then be queried through the stats.

Billing

The Billing module allows the user to allocate costs against each procedure and run financial reports against these cost files. The system supports multiple costing files and therefore allows sites to have different costing models for different providers.

Mobile Cris

Mobile Cris has been designed to offer RIS functionality on the move, supporting the drive towards paperless working. Utilising current electronic ordering and reporting methods, and incorporating familiar technology and workflows, Mobile Cris offers an efficient and secure wireless solution.
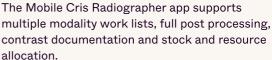
Mobile Cris is designed to function as a web-style application and is therefore compatible with most tablet devices, based on operating systems including Apple, Windows and Android. The Mobile Cris platform is initially launched along with the core Radiographer 'app', which will be supplemented by a broader portfolio of apps as the platform develops. Future planned apps include Portering, Questionnaire and Obstetric based functionality.

The Mobile Cris Radiographer app supports multiple modality work lists, full post processing, contrast documentation and stock and resource allocation.

Cris Analytics

Analytics provides a targeted radiology specific dashboard for answering key departmental questions. The web-based user interface shows interactive charts that include the ability to access patient-specific information. The standard package is available to all Cris customers and provides departmental managers with the information they need to optimise efficiency, while our advanced 'Pro' version enables the user to build customised charts and access a wider library data, supporting greater tactical and strategic decision making.

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