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HAND-HELD DATA CAPTURE SYSTEM: SIRIUS

Document prepared by an expert from France

HAND-HELD DATA CAPTURE SYSTEM: SIRIUS

1. The development of a hand-held data capture system such as «Sirius» has several aims.

2. The first aim is to improve the quality, speed and security of data input through a user-friendly interface and sophisticated characteristic parameter setting, such as:

(a) Define, and change when necessary, the display order of the characteristics.
(b) Define a data format for each characteristic (Note from 1 to 9, 2 digits for the number of days, etc.). This helps to avoid input errors and allows automatic moving to subsequent input cells.
(c) Define a lower and upper limit to avoid unexpected values or mistakes e.g. typing 119 instead of 19 (by entering "1" twice by accident) where the number is not expected to be greater than 99.
(d) Input type to select the behavior of each characteristic , such as:
- No input → when the display of existing values for that characteristic is useful, but the values cannot be changed;
- Not displayed → when values of a characteristic have been entered, but the display is not needed;
- Day of month → characteristic is automatically entered with the current day;
- "Criteria" → characteristic is automatically entered with a reference value.

(e) A lower and upper filter to define which cells are accessible according to these filters.

Etc.

3. The parameters can be selected and updated in the office, or in the field, according to need.

4. The second aim is to facilitate data input of large DUS trials. If the number of varieties under study and the number of reference collection varieties are very high, it is not always easy to manage the trial by a simple Excel file. In France, trials can correspond to 250,000 notes. In such cases, a user-friendly interface is necessary.

5. Hand-held data capture makes it possible to decrease significantly the time that the user needs to prepare working documents such as data grid, reports, computations, etc. It can also increase the speed of data collection.

6. Another important aspect is the fact that the collected data can be integrated into central, harmonized and shareable information systems. This is very useful, for example, to:

(a) Calculate or globally estimate several indicators on DUS activities.
(b) Develop a methodological approach or computation (e.g. setting of a specific statistical analysis).
(c) Use data from previous years.

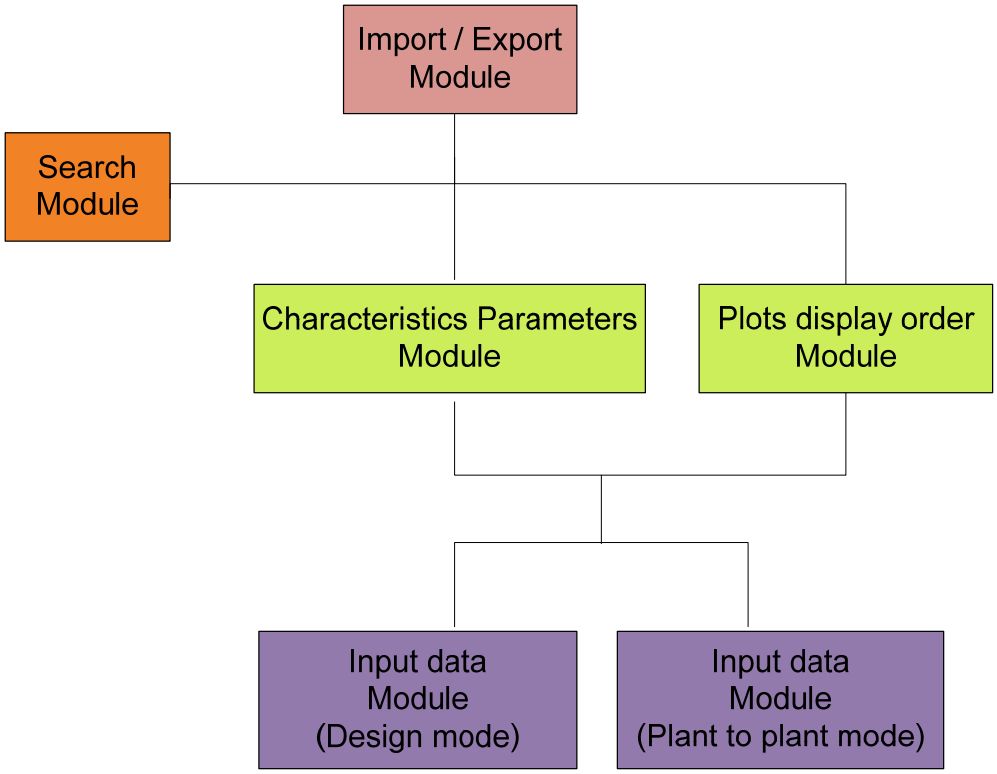
(d) Improve documentation, traceability, and the training of new employees, for example, in the scope of quality management.

Etc.

7. When DUS experts from different crops use the same system, it is easier for them to exchange information on how they manage their DUS data. This allows harmonization of practices, where appropriate.

8. The «Sirius» hand-held data capture system provides several screens (developed with WINDEV) based on a relational database (HYPERFILE database). The database model is provided in Annex 1 to this document.

Synthetic view of Sirius application



9. This software works on all Windows platforms. The minimum resolution is fixed to 600 x 480. Development of the Sirius system required more than 2,500 hours of IT specialists' time.

10. For more information, please contact christophe.chevalier@geves.fr. A presentation on Hand-held Data Capture System in France will be given at the twenty-seventh session of the TWC.

11. In France, hand-held data capture has been used for approximately 30 years; «Sirius» constitutes the third generation. After the first year of use on several species, a positive assessment can be made on:

(a) The high level of performance: some trials have more than 200,000 notes.

(b) The reliability of the system: field crop managers have input more than 1 million notes with «Sirius».

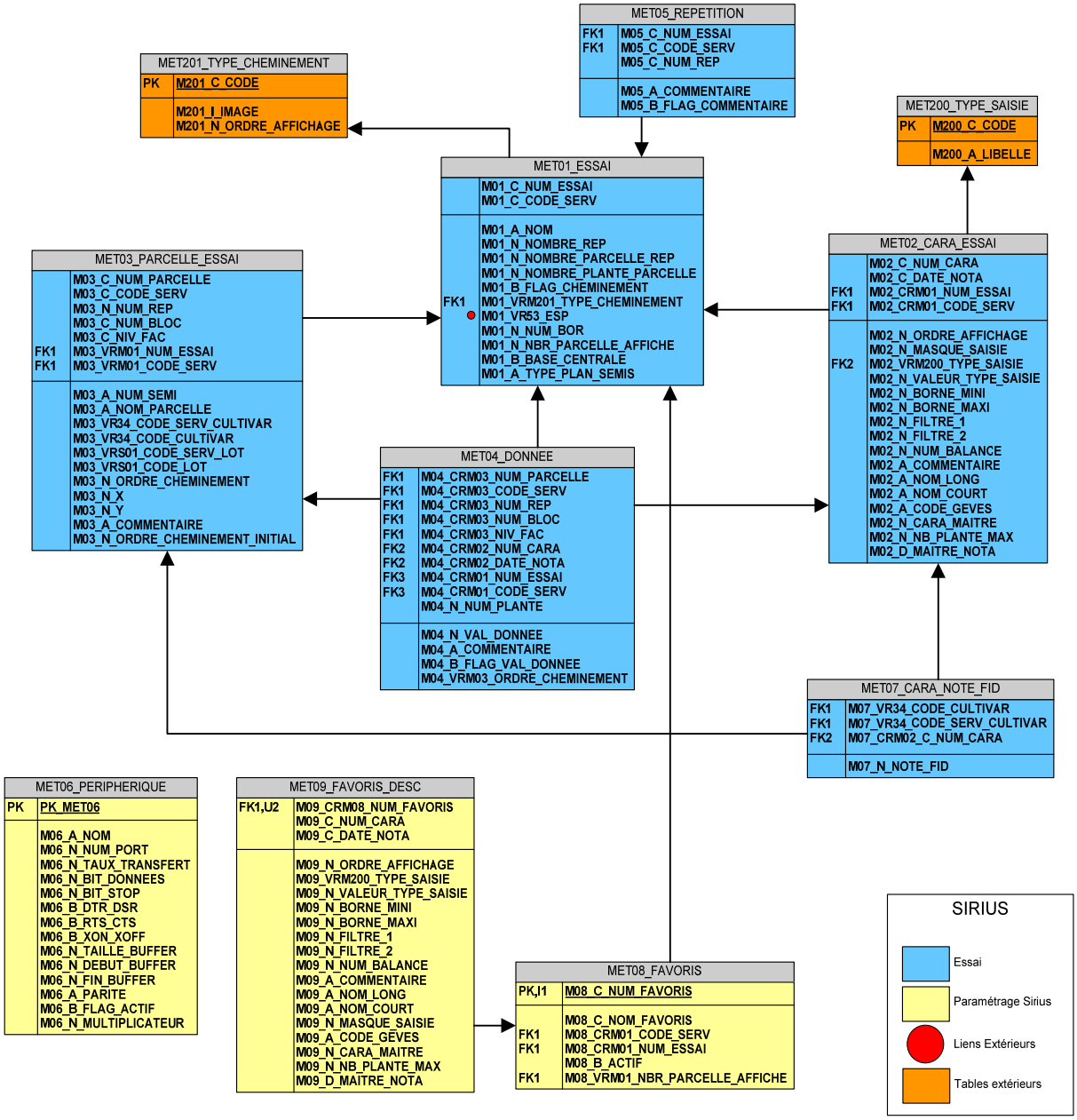
(c) The flexibility and facility of use: the majority of field crop managers now use this system to collect their own data. This increases the amount of data which are really managed in a shareable information system.

(d) Time-saving: some DUS experts have halved the time of data collection.

[Annex follows]

ANNEX

ANNEX 1: SIRIUS DATABASE MODEL



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