1. NEW FUNCTIONS IN ERIKA 3.00 - SUMMARY

This is a brief summary of the new functions in ERIKA 3.00 compared to ERIKA 2.05. Please see the manual or the help texts for more information.

TOOLBOX
The toolbox function simplifies the operator interface. It will make it easier to start functions that you run very often or are placed deep in the menu tree. A toolbox is a control panel with buttons. When pressing one of these buttons, the operator will start an ERIKA command (eg. Create IR window, Start scanner or Add a spotmeter), an ERIKA macro or an OS9 command (+ internal channel messages). There are some default toolboxes delivered (IR sources + analysis, filehandling, filterhandling, starting macros), but the operator can create toolboxes of his own.

ALIGN SCANNER
The scanner can be aligned to a reference image taken from IR-1 or IR-2. The reference image is drawn as a chequered pattern (i.e. partly transparent) on top of the scanner image.

SHOW THE OTHER (CHANNEL) MANIPULATED
These functions take images from a scanner or a stored sequence in one channel, manipulate them in some way, and present the result in the other channel.

This menu selection has been divided in three groups:
- Time processing control
- Display processing control
- Align and subtraction control

TIME PROCESSING CONTROL
Takes images from the other channel and makes some kind of time processing on them (e.g. time averaging). The new filter Maxmin presents the maximum or the minimum value of each pixel and creates a new image.

DISPLAY PROCESSING CONTROL
Takes images from the other channel and displays them in another way (e.g. mirrored). The new filter View builds up a new image with reduced copies of 4 (9 or 16) images shown together. The temperatures, colours and time etc. of the constructed image will be those of the most recent image, which is marked with a red frame.

ALIGN AND SUBTRACTION CONTROL
Takes images from the other channel and makes manipulations related to alignment and subtraction.

The operator can align images of the other channel (live scanner or stored images) to a reference image and display the result. If desired, you can mix the reference image with the result, to check the quality of the alignment visually. The mixed image should not be used for measurements.

You can subtract images of the other channel (live scanner or stored images) with the reference image. The subtraction takes place in temperature (K, C or F) or in object signal. You can, of course, combine the functions alignment and subtraction.
OBJECTPARAMETERS
All measurement functions (spotmeter, line, area) can now have an object parameter set (eg emissivity, ambient temperature) of their own, a local set. The maximum number of object parameter sets is by default set to 10, but you can change it if you like.

There is a group of functions working with the object parameters (OPs):
The OPs can be edited, stored to disk, recalled from disk. You can also use emissivity calculations individually.

You can select to use a local set of OP by selecting Keep current (or edit), use an OP of another measurement function by selecting Use other, which means that several functions can use the same OP. Use OFF will result in using the Object Parameter set of the S.Cale.

BASE TIME
A base time facility is added to ERIKA. The base time is used for relative presentation of image capture time. The base time can be set by the operator, the current base time can be kept or you can use the base time of the image source.

ABSOLUTE TIME / RELATIVE TIME
The IR window presents image capture time in a line below the image. (This information can now also be shown in the result window.) You can choose to have this time show relative to the to the base time or in absolute time.

PLOT
The plot function has been improved. It can now plot 6 different values at the same time. Furthermore, there is a time scale for absolute time or relative time.

SEQUENCES IN ONE FILE
Sequences can now be stored in one single file with the extension .seq. The storage speed of a name.seq file is slightly faster than the storage speed of separate name_xxxx.img files. Part of the .seq file can be deleted or copied to another .seq file. A .seq file can be appended to another .seq file.

PROFILE
The profile can be stored in an ascii file with a header and all pixels (position and temperature values).

BEEP
There is a loudspeaker in the system controller. It can now be switched on or off. It is on by default. The beep is used together with error messages and warnings.

OPERATOR INTERFACE
An embryo of a user defined menu is reached when pressing the right mouse button on the background. The function key F7 will circulate the windows front and back. Shift + right mouse button within a window will put that window in front.
IMPROVED FUNCTIONS
- Copy images to a diskette permits change of diskette at "full medium" condition.
- A lot of help texts has been added (eg all new functions, all ERIKA commands).
- By optimizing the program the overall speed is increased and more memory is available for applications.
- By setting an environment variable the list function will not separate devices and directories from files and thus increase the speed on slow devices (eg floppy, optical disk).

2. NEW FUNCTIONS IN ERIKA 3.00 - BY MENU
Aux file handling: Copy sequence (in System menu)

- Delete sequence
- Append sequence

Equipment
- Sound on
- Sound off

Top line menu: Toolbox
(in Top line menu)

- Select toolbox

Toolbox: Select toolbox

- IR toolbox
- File toolbox
- Filter toolbox
- Macro toolbox

Copies a part of a sequence, stored in one .seq file, to another .seq file.

Deletes a part of a sequence, stored in one .seq file.

Appends one sequence, stored in one .seq file, to another .seq file.

Turns the sound on. There will be a beep when eg an error messages is presented, a wrong key pressed.

Turns the sound off.

A new sub-menu

Selects a specific toolbox. A toolbox is a controlpanel with a number of buttons, which will start an ERIKA-command, an OS-9 command or a macro when pressed.

This is a predefined toolbox for handling IR-sources and analysis.

This is a predefined toolbox for file handling.

This is a predefined toolbox for starting filters.

This is a predefined toolbox for starting macros.
Date and time line
(in IR- window):

Time presentation menu

Time presentation menu:
Absolute time

Relative to base

IR menu:

Image base time menu

Image base time menu:
Set base time

Keep current

From source

Select source:
(in IR menu)

Scanner

Align scanner

Time proc. control

Time proc. control:
Maxmin

A new menu.
The presentation of the image capture time in the IR window becomes absolute.
The presentation of the image capture time in the IR window becomes relative to the base time.
A new sub-menu.
Sets the base time for relative presentation of image capture times.
The base time is a new part of the image definition.
"Freezes" the current base time.
Example: This command will prevent further changes in the base time of stored images from penetrating into the system.
Uses the base time of the image source.
Example: This command will let variations in the base time of stored images pass through into the system.
The scanner control panel is provided with an extra button (STBY) for the standby mode of Stirling scanners.
This function aligns the scanner to a reference image. The ref image can be drawn in two types of raster on top of the image from the scanner.
Shows the other channel manipulated. This is a group of time processing filters (eg average, recursive).
Creates a new image with the maximum (minimum) value of each pixel since the filter started (or new size detected).
<table>
<thead>
<tr>
<th>Select source: (in IR menu)</th>
<th>Display proc. control</th>
<th>Shows the other channel manipulated. This is a group of display filters (e.g. mirror, rotate).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display proc. control:</td>
<td>View</td>
<td>Reduces the incoming images to e.g. a 1/9 of their size and presents the last 9 in one image.</td>
</tr>
<tr>
<td>Select source: (in IR menu)</td>
<td>Align &amp; Sub control</td>
<td>A new group of software manipulations. See below.</td>
</tr>
<tr>
<td>Align &amp; Sub ctrl: (in Select source menu)</td>
<td>Align IR-X with Ref</td>
<td>Aligns an image in the other channel to a ref. image and displays the aligned image.</td>
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<tr>
<td></td>
<td>Align and Sub IR-X with Ref</td>
<td>Aligns an image in the other channel to a ref image, subtracts the ref image and displays the result.</td>
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<tr>
<td></td>
<td>Align and Mix IR-X with Ref</td>
<td>Aligns an image in the other channel to a ref image and creates a combined image consisting of the result image and the ref image.</td>
</tr>
<tr>
<td></td>
<td>Subtract IR-X with Ref</td>
<td>Subtracts the reference image from the image in the other channel and displays the result.</td>
</tr>
<tr>
<td>Spot menu, Line menu, Area menu: (in IR menu)</td>
<td>Obj par</td>
<td>A new submenu. The measurement functions can now have an object parameter set (e.g. emissivity, T amb and so on) of their own.</td>
</tr>
<tr>
<td>Obj par: (in spot menu, in line menu, and in area menu)</td>
<td>Edit</td>
<td>Edits the local object parameters set.</td>
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<tr>
<td></td>
<td>Store</td>
<td>Stores the object parameter set.</td>
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<td></td>
<td>Recall</td>
<td>Recalls an object parameter set from disk.</td>
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<tr>
<td></td>
<td>ECalc</td>
<td>Calculates the emissivity factor.</td>
</tr>
</tbody>
</table>
Keep current

Keeps the current object parameter set and uses this. Example: This command will prevent further changes in the objpar set of stored images from penetrating into the system.

Use OPSC

Uses the Object Parameter set of the Scale.

Use other

Uses (is linked to) the object parameter set of another measurement function.

Image analysis:

The colours of the analysis symbols are now 6.

Colours

Time scaling and image scaling is provided. The time scaling is either automatic or manual.

Plot

Will now plot up to 6 results in the same graph using the six analysis symbol colours in the same order as the symbols.

Plot menu: Abs/rel time

Absolute or relative time presentation in the "cursor" field.

Profile menu: Store

Stores the profile in an ascii file.

Result window menu (on first line): Show abs time

Presentation of absolute image capture time, on a separate line in the result window, is provided.

Show rel time

Presentation of image capture time relative to the base time, on a separate line in the result window, is provided.

Background: User defined menu (right mouse button)

A new menu. This enables the operator to edit the menu file (.agwmrc) and input his private commands.

User defined menu: Help

Starts the help text of editing the menu file (.agwmrc)

Functionkey F7

Circulates the window back, means that the top window is pushed back.
Acceptance

Select source:
(in IR menu)

Recall sequence

Filehandling
(in system menu)

Copy

Menus:

Top line menu

Windows:

Shift + right mouse button

Highlight bars

Help:

Help

The possibility to store a sequence of images in one single file, eg name.seq

The control panel will now show the number of accepted (or lost) images.

The function can now handle sequences stored in a single .seq file.

Copy images to a diskette now permits change of diskette at "medium full" condition.

Will now permit changing of the current location (set location)

Pressing this button inside any visible part of a window will bring it to the front as well as move it sideways.

The horizontal bars in the centre of the title line of most windows are now thicker and dashed. This is to avoid flicker during TV interface.

Texts related to the new and improved functions added.

A table with typical emissivity values has been added.

Topic Erika commands updated with the new or changed commands in the Erika control language. This is the language used in Erika macros.

Images stored the last image twice.
5. DEMO MACRO

A demo macro is delivered. It requires a scanner on IR channel 1 and an empty screen. It takes 5-10 minutes.

* Select Run macro from the menu of the top line of the screen.
* Fill in the dialog panel as shown below and click on the OK button.

LOCATION:    /h0/usr/erika/demo
NAME:        demo_a