Applications "Milky Way Memo" and "Milky Way Memo Light". (Versions 4.2).

Useful information.

1. Introduction.

Personal notebook, memo and organizer for collecting, storing and using information sorted by notes and application documents employing connection between notes for informational menu creation as well as mind mapping on defined subject. Information in any note is shown as text, blocks of image with text and attachments grid at the note end. Texts can be illustrated with images and a text description can be added to any attachment using block of image with text.

   Notes are synced on all your devices or in a group of people with the same cloud storage account (till 256 devices).

   Organize your home projects, keep a diary. Store galleries of photos with their description. Add info about files attached to notes usage. Create equipment lists, shopping lists, groceries lists. Plan your budget, use it for expenses accounting or other sums calculation, prepare email or SMS templates, create your full contacts archive or address book, keep all your passwords and credit cards numbers protected with password and at the same time always at hand. Plan your camping trips or journey, write travel diary. Make a text description of markers of traversed path or route on a map, attach photos to them. Let your friends track your movement on a route. Use as a help tool which is always at hand to not go astray in a forest. Create an itinerary. Use for field data collection with CSV text format data export with possibility of import it into desktop PC application (Microsoft Excel, for example) or database.

   It is especially good for collecting, keeping and using information organized in arbitrary way, not template based. Hierarchy of any complexity and links between notes are allowed. There is a possibility of sdcard and internet media files references and some of not very complicated processing of collected in memo numeric data, in the form of sums calculation, including custom formulas definition. Wide use of link between notes concept here is one more its distinctive feature providing an easy way of creating menu of arbitrary hierarchy to information of any complexity and which helped in the application name and logo definition.

Features of version 3.8:
- Text typing on keyboard, voice to text option in text entry.
- Photo, audio, video, any document files attaching to notes, restricted only by device storages sizes.
- Geographic tracks and notes with current geographic coordinates. Editing and viewing descriptions of tracks markers just from a map.
–   Two alternative interfaces. One is for editing and viewing multiple short notes, other one is for working with single long note and note with attachments.
- Menu of arbitrary hierarchy creation as well as notes search tags. Speeded up access to information by references. Easy notes navigation by paging. Paging lists of notes in horizontal direction to lists deeper into hierarchy (as in a book) and vertical direction (scroll lists of notes up and down). Select a child note and page forward. Page memo back till its start. Quick parent notes access in second navigation mode. The left list shows parent notes for a note chosen in the right list, which contains children notes for a note chosen in the left list. Navigate to parent notes of any child

note just by clicking on them. Page back to reach parent notes of currently selected item in the left list.
- Widgets for device home screen. All notes. Notes of selected document and list. Schedule. Pinned notes.
- Multiple documents support, notes search by entering key word or phrase in one document only or in multiple documents at once, copy and move notes or tree of notes between lists of the same or different documents. Text and attachments exchange with other applications installed on device.
- Schedule and reminder.
- Geofences and tracks. Reminder of location events such as inside, outside or crossing geofence boundary and track recording by these events.
- Notes functions. Call a number, template emails and sms, show geo coordinates or address on a map, open internet link in a browser, define color and sums calculated for numeric values from notes, custom formulas definition. Sum of values from selected notes.
- Private information protection with password.
- Dropbox, Google Drive sync with data merging, working in groups and possibility of using different storage accounts for different documents. No "conflicted copy" file problems. Data merging and conflicts auto-resolving support. With multiple devices, it's not required to sync a document before editing. Data from different devices would be successfully merged after next document sync.
- Import and export of application documents and contacts. Export of contacts into a «*.vcf» file and sending it to devices, electronic business cards (vcards) exchange by Bluetooth or email. Export in CSV text format.
- Application settings of its functioning and appearance of UI elements.
- Settings for every document in application. (Syncing, encryption, disabling reminder notifications and disabling track recording and reminder notifications for geofences).

2. Storage and using information of different formats in notes.

Multi-line texts restricted only by device memory and attachments limited by available to application storage's size can be stored in notes. Aside from main inner storage, external storages on cards inserted into device should work for storing attachments as well. But inserted USB storages are not supported as for now.

There is one more restriction in application free version "Milky Way Memo Light". Notes number for which it's possible to add attachments should not exceed 10 per document. But number of attachments not restricted.

To use external storage for storing attachments go to "Settings/Application settings" form by using main application menu which can be swiped from the left. And activate options of category "Attachments storing" before creating a new document. Then new document would be set to store attachments on external storage (for example, on inserted into device memory card). "External storage" option would let you select external storage, and "Use for all" defines if it is needed to put all attachments on external storage or use it for long attachments only with size more then 32 Mb (usually, that is for video).Those long attachments are stored as separate files and can be accessed by other applications (if not encrypted with password). Value "Primary" of option "External storage" often selects emulated external storage created in main inner storage which is useless to choose to increase storage space available for application. But it can be useful for Android 6.0 and less devices to store there long video to avoid file copying to start play video by external video players which can not play video from private application directory on old devices. In application, you can start play video by a click on video-attachment attached to a note.

Texts of notes and images (photos, pictures, images files of main formats) can be viewed just inside this application. To view attachments-images with maximum magnification activate view mode with one cell per row for attachments grid by a click on button with "1" sign on upper panel. You can set this mode as default mode when open one note view interface for note with

attachments. To set this, click on "Default attachment grid" option of actions menu. Turning device in horizontal position can let you see images with even bigger magnification. Actions menu option "Screen and att. padding" can be used to change default state of showing screen and attachments padding, to show this padding in view mode with one cell per row for attachments grid or to hide this padding in other view modes.

Additionally, menu to select an application registered to work with attachment of defined type would be opened by a click on attachment. After application selection, all work with attachment should continue in selected application. So any attachment viewing (or working with) can be done in your favorite application.

3. Adding attachments to notes.

Any file attachments (photo, images, video, audio, text documents, e. s.) can be added to notes just by sending them from other applications which create or store media files, or from file managers. Photo and video can be added just from camera application, or from gallery by a click on button "Share" after marking selection. Any files accessible on device can be added by application option "Attach file" from a panel swiped from the left. By default, attachments are placed in grid cells at the note end altogether with name and storage size. (If it is needed to show full size in bytes then select application settings option "Exact length"). Number of cells per row can be changed from 1 to 20 for attachments grid making images smaller or stretching them bigger.

Blocks of images with text can be used to add text description to photo, video or other attachments, as well as to insert images as illustration to note's text. Blocks creation and editing is described in "Step by step" document under title "Seven steps to create block of image with text.". It can be read just from application main menu option "Help" or from the site www.milkywaymemo.com . Useful instructions on adding attachments to notes can be found under title "Adding attachments to notes."

4. Voice to text option in text entry.

Most of Android devices support voice recognition technology rather good nowadays. The Milky Way Memo application can activate voice to text option for text entry by button with mic. icon in edit mode or by keyboard button with microphone sign in it (if available on your device). Text entry occurs in the editing area cursor position.

5. Notes with current geographic location coordinates.

Working with geographic location required that location services be turned on in device settings. If not then such a notes will not be created. To create it, first switch to edit mode. Then select a list for new note insertion by long press on some list note or on empty list. A context menu should appear. Choose option "Add current geo location" in there. A note with text "Measuring..." should be created in selected list. Measurement should be finished after several seconds (30 s. maximum) and text in this note be changed to

geo:latitude,longitude (type)

It can be several alternatives of type:

"ntw" - mobile or wifi networks

"ntw~2" - average value by two measurements.

"gps" - in the case of more accurate measurements by satellites.

But inside a building gps measurement can be not as accurate or even not available at all.
If mobile internet and wifi networks are turned off or not in a range, then location by networks will

not be available as well. In those cases the type will be

"Not available!"

"gps last available in date-time"

"ntw last available in date-time"

The last two cases can occur if coordinates are not available during 30 s measurements, but some value measured previously is available. In that case you will have to decide yourself if the coordinates are authentic enough for the current location.
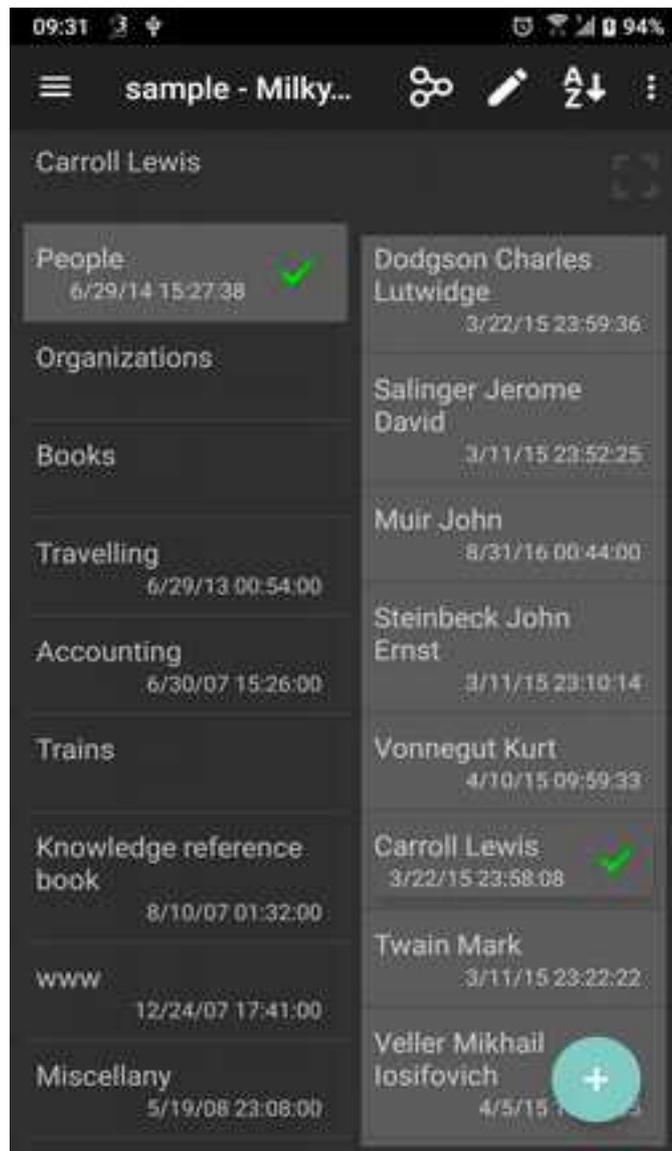
Pic. 1: Main Application screen with document "sample" opened. Note with text "People" is selected in the left list, and active note with text "Carroll Lewis" is selected in the right list. Full text of active note is shown in view field at the top. You can see main application menu button (sandwich) on the left and actions menu button on the right on the upper application bar. Floating action button "+" to add a new note in active list is on the bottom of the right list. Button "Pen" on the upper panel activates quick edit mode for short notes. Separate screen to view and edit selected note can be opened by a click on text view field.

6. Main interface features.

See "Step by step" instructions for practical recommendations and usage examples as well. It is available from application "Help" main menu option or by this link www.milkywaymemo.com.

Application interface is based on the main application menu (pic.2), actions menu (pic.3) and

context menu opened by a long click on the note in the left or right list (pic.4). These menus are different in the case of edit mode turned on and off. And context menus depend on notes functions and can be different in the case of empty and not empty lists of notes. Document changes can be done when "Edit" option is turned on (with a "Pen" button on the actions bar or floating action button "+". See pic. 1). Document is saved on edit mode exit (choose actions menu "Stop edit" or press "back") or after switching to another application.
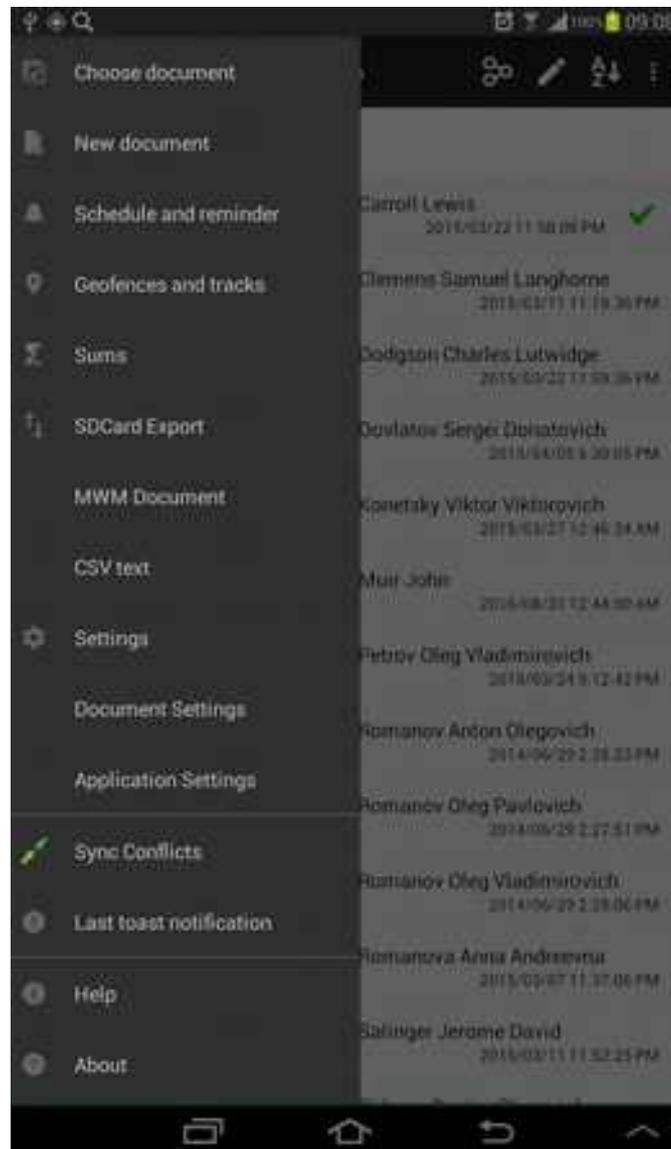
Pic. 2: Main Application Menu opened with left button on application bar (see pic.1) or with a finger swipe from the left side of the screen.

To build tree of notes hierarchy, it's enough to add notes in chosen list with button "+" then select new parent note and page forward to empty list and choose it for new notes insertion and so on.

If it's required to point from several notes to one note (when one note has many parent notes) than after a creation the first link from parent to child you have to use references. You can do this from context menu in Edit mode (see pic.4) or using notes copy option (see two panels navigation in chapter "Notes navigation modes" and "Step by step" instructions document). Open the context menu on some note and choose an option "Copy". Go to the new list with children of other parent. Open the context menu on any note of that list or on empty list and choose option "Paste reference

in new list". Cyclic links between notes are allowed. They can occur when using references. (For example, see People/Twain Mark/Clements Samuel/Twain Mark/Clements Samuel/... in the document "sample"). If you delete a note referenced by many parent notes then only the particular link from parent to this note is removed. Only when all links to this note are deleted the note itself will be removed finally.
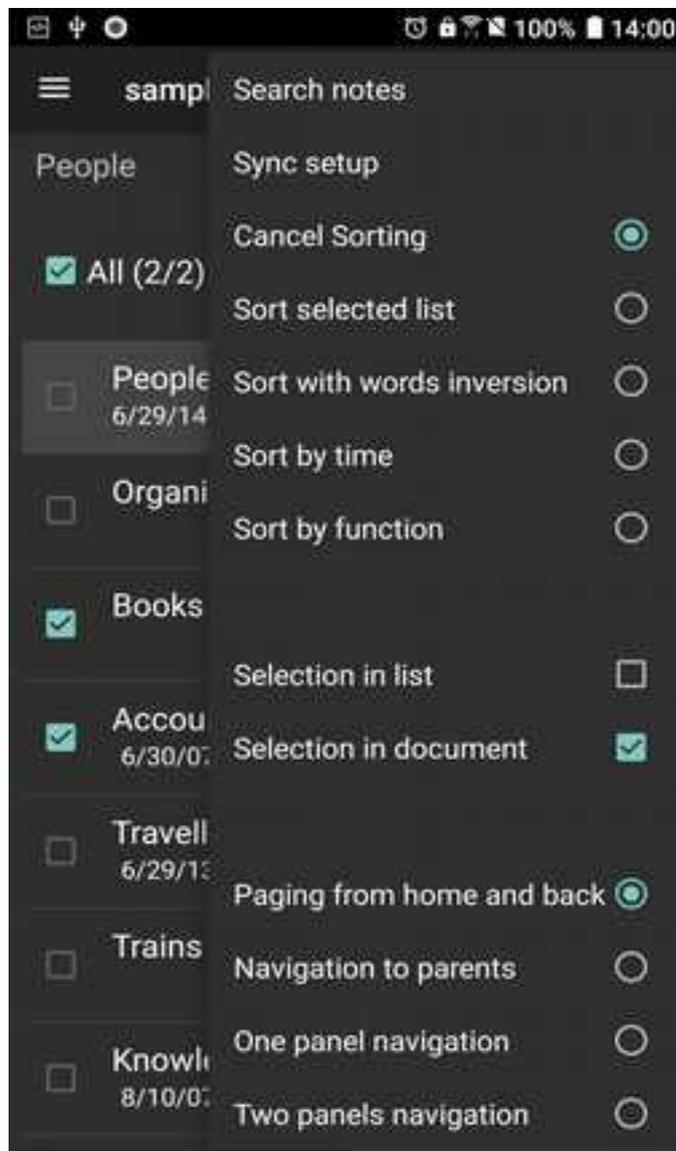
Pic. 3: Actions Menu opened with right button on application bar (see pic.1). Sorting modes apply to active list. After one of selection options activated, it's possible to select multiple notes in lists.

Parent notes of any note can be easily accessed in second navigation mode activated by pressing on "Navigation mode" icon on the action bar. (On the left from "Pen" icon on the action bar on pic.1). The left list shows parent notes for a note chosen in the right list, which contains children notes for a note chosen in the left list. In that mode left list notes editing has some restrictions, for it is not allowed to add parent notes without creating their parents first. So some options will be disabled. If you still need to add items here - page back to position that list on the right column where all editing options are available.

    Pic.4 shows disabled options of notes moving "Move up" and "Move down". Those options work

if list sorting is turned off only. In the case of pic.4 the note "People" has been assigned function "Children Sorting", so for the currently selected right list with "Carroll Lewis" note those "Move up/down" options are disabled. Use "Move in lists mode" if many notes moving up and down required. Button activating this mode with arrows pointing up and down is shown on pic.4.
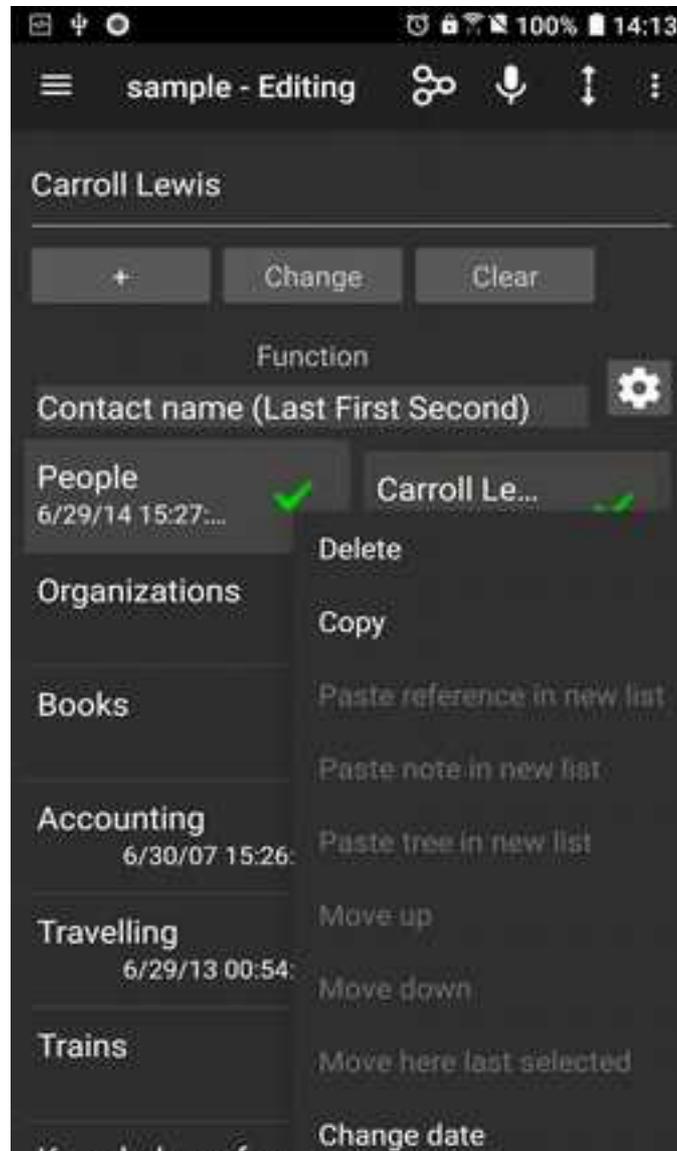
Pic. 4: Edit mode context menu opened on the note "Carroll Lewis" (by long click on the note from the right list).

7. Interfaces to view and edit long and short notes.

Notes navigation interface and interface to view and edit of multiple notes with quick switching between notes is available on main application screen (screen with lists of notes and text view field). This interface is convenient to work with multiple short notes and for quick adding new notes, but it requires some learning and adaptation for "+" and "Update" buttons here are finishing modification operation instead starting it.

Working with long notes is more convenient using interface for one note view and edit in a separate window. Also, switch to that screen is needed to observe and edit illustrated text, blocks of

text and attachments or just attachments in the grid at the end of note. (Viewing notes attachments is available on search screen as well.)

You can go there by a click on text in the note view field just above the notes lists or by a click on a button with rectangle sign on upper panel (see pic. 1). Also, Floating action button "+" on the main screen opens separate text entering form of one note editing interface to add a new note. Not like on main application screen, you can find full and more familiar interface of creating and editing notes here. It includes tags, events, notifications setting, adding or removing blocks of images with text, adding or removing empty text blocks.

Short notes viewing.

Here on the main screen, you can find any note in left or right lists easy by your own built menu paging horizontally and scrolling vertically those menu items and notes in lists. Currently selected note is shown in text view field just above lists.

There are three modes of text view here with different text view field height. Transition between them can be done by long click on text view field. Mode with minimal height of two lines is set by default. Interface of single note view and edit in separate window can be opened conveniently by a click on text view field in default mode. Going back to multiple notes interface can be done quickly by arrow on upper panel on the left.

Short notes quick editing.

If text edit mode activated, switching between two available edit field heights is possible by a click on actions menu option "Edit field size".

Upper part of screen on pic. 4 with the text "Carroll Lewis" is editing area. It reflects text of a note chosen in right or left list. This area can grow down while text entering with keyboard or voice. After reaching some limit it stops growing and then scrolling can occur. If you prefer to set height on maximum available size then use option "Edit field size" from the actions menu.

The clipboard interface for coping to and from other applications (Internet browsers or text editors) is supported in the editing area. This interface is activated by long press on the word or empty space of the editing area. The following options "select all", cut, copy to clipboard and paste from clipboard are possible. For example, to copy to clipboard, mark the text and then choose option "Copy" from actions menu or Action Bar (which contains clipboard options in the moment). After the copy done - clipboard interface turns off.

There are 3 buttons down from the editing area. "+" button inserts text from the editing area into a new note of a chosen list. "Change" button updates text and function settings of chosen note with editing area text. "Clear" button clears editing area text.

There is a spinner with drop-down list of functions further down (or right for horizontal layout) which can be assigned to notes. This spinner shows the current function assigned to the chosen note. Function "Contact name" (Last First Second.) is shown on pic.4 . (It activates sorting of children notes by function, so that phone numbers could be shown together, for example). If it's required to change current sorting mode you can do that temporarily by using action menu sorting options (pic.3). The option "Sort with words inversion" can be useful for a list of people names when someone is searched by his First Name instead of his Last Name.

Editing. Full interface.

Option of adding a new note is activated by floating actions button "+" from main application screen. Use "Pen" button from interface for one note view to start editing an existed note. "Create blocks of images with text" button is here as well, just near the "Pen" button. Block sizes and padding sizes changing, deleting blocks options are available after block's image selecting by a long click on it form one note view screen.

New options of adding and deleting text blocks become available after text edit mode activation in working with one note interface. Those options can be useful while editing blocks if images with

text. For example, if several block with photo added one after another and it's needed to insert text between them then select block before which text should be inserted by a long click on block's image and click on button "Text only block" on the upper application panel. Then empty text block would be added just before selected block with photo, so you can activate it by a click on it to show text editing cursor and start entering text.

Pic. 5: Full notes edit interface. "Text edit mode" button is on upper panel to edit in separate window text form selected block which is restricted colored line at the bottom here. Button with little cross to delete empty text block at the note's end. Panel at the bottom is a tool to navigate to different forms to edit information like text, functions, colors, tags, events.

It's possible to go to text of selected block editing in separate screen by a click on button "Text edit mode" here (see pic. 5). Block can be selected by activation edit cursor on its text. You can go from here to function, color, tags, reminder events selection for editing note as well. The "Color" editing

form has the final purpose to select note's function as well as "Function" form, but it has subset of functions which were created by user for its own needs such as note's color setting, group of notes color selection, name of sum setting for notes for which sum is calculated to show it on "Sums" screen (see chapter "Sums calculation").

All tags used in different application documents are shown in a list on the "Tags" form so you can quickly set required tag from the list for editing note. Searching of a tag in this list works as well while typing text in edit field above the list. «+» button here adds new tag with entered in edit field name if the tag does not exist in editing document. Tag's name can contain more than one word.

All reminder events and just schedule events linked to editing note shown in a list of "Events" form sorted by time. You can add new events or edit them in regular "Schedule and Reminder" interface by a click on "+" or "Pen" buttons on upper panel. Those events are regular notes themselves and can be linked to other notes using usual application references copy-paste interface or be deleted as well.

Viewing. Full interface.

You can page up and down or use fast scroll bar in view mode for one note in separate window. There is full screen view mode as well where application bar and system status bar are removed. To exit from this mode use swipe from upper screen edge or "Back" button. On top of note text you can see note common info (like on pic. 5) if "Show note info" option is checked in actions menu.

There are attachments not linked to text in the grid at the note end. To see images stretched to screen sizes on maximum scale switch to one cell per raw mode using button on app. bar. Attachments can be viewed in other applications installed on device. To do it just click on any attachment added to a note. It should work for attachments grid as well as for attachments blocked with text.

All attachments are shown as rectangles with a signs associated with their types in the center. 3-4 letters file extension is situated just under the type sign. Usually, it associated with type as well (for example, pdf, jpg, png, mp4,...). Brief info about current attachment state can be found above type sign, such info as:

exclud. - for attachments excluded from document by corresponding export option

syncing – if attachment reading from cloud storage is active while syncing

r.sync. – if syncing is not finished on remote device (for example, connection to internet for remote device was lost), so the attachment is not available in cloud storage yet, so reading from cloud storage is not started yet

loading – loading of image thumbnail (represented image or video) to screen started. This is actual in most cases for encrypted attachments when thumbnails load slowly. For long (more then 32 Mb) and at the same time encrypted video thumbnails are not loaded at all, and this state is not possible

import. - not finished copying attachments during application document import

encryp. - not finished attachments copying during changing document encryption password, so that decryption of this attachment is not possible until user open document settings dialog to finish changing password

copying – not finished attachment copy

er.NN – system error number during thumbnail loading (can be helpful for tech. support)

Photo, pictures and video are represented by their thumbnails, so rectangles with type sign at the middle are used for them if it is impossible to load thumbnail image only.

8. Perfect menu and tags for notes access.

You would be able to organize your memo in whatever way you like even more branched than with tags using linking between notes. Application lets you create a document with notes which can have arbitrary links between each other like stars on the sky, if you prefer. Link can go from one parent note to many child notes as well as several different notes can be a parent note to the same child note.

One page on the main application screen shows two lists of notes usually. Choose a note from the first list, and you would be able to see all notes linked to it in the second list. It's possible to overlook and edit notes just by moving along those links starting from the root, then going forward to children notes, and then backward to parent notes just by choosing items in the lists and turning the pages.

The pic.1 presents two lists of notes for document with the name "sample" which is included in application distribution. The note "People" is chosen in the left list. And all notes linked to it are shown in the right list. Those are the people names. And the "Carroll Lewis" name is chosen. Chosen notes are marked with a check mark (green check marks on the pic.1). Page by half page forward, and you will be able to see a child note linked to "Carroll Lewis" in the right list. This is "Dodgson Charles Lutwidge", the real name of the writer. Move one half page forward again – and you will reach to his date and place of birth (see the document "sample").

Thanks to those links you can build any custom menu hierarchy that lets you reach required notes as easy as you like avoiding necessity of notes search tags creation for every note.

But if you prefer working with tags the such a possibility still exists. Aside from a search, tags can be useful as notes categories and attributes.

Just go to "Tags" form from full note edit interface using bottom navigation panel. You can see all tags created earlier in application documents there, as well as add a new one, set or unset particular tag to a note.

As a matter of fact, tags are just a special case of one level hierarchy menu. So tags can be created as usual notes with short text as well. How to do this is described thoroughly in "Step by step" instructions. Option of showing common note info has names of tags set for a note. To recognize tags by edit interface and in notes info tags have to be in a list linked to a "Tags" note of root list and have to start with symbol "#".

9. Notes navigation modes.

There are four notes navigation modes available for selection in actions menu (pic.3) or using navigation mode change button on the application bar (left from pen button on pic.1)

Paging from home and back

Navigation to parents

One panel navigation

Two panels navigation

Default notes navigation mode is «Paging from home and back». This mode is the best one for menu of any complexity navigation. Select a menu item note in the left list and heirs of that note will appear in the right list. You can get into any menu position by paging these lists horizontally

and selecting required notes. It's possible to get back home to the root of hierarchy from any position just by paging back and then get to the same position again by paging forward. You can page by one or by two lists at once.

Parent notes can be easily accessed from other navigation mode which can be activated by one or more clicks on navigation mode change button on the left from "Pen" icon on application bar (pic.1), or by actions menu option «Navigation to parents» (pic.3). The left list shows parent notes for a note chosen in the right list, which contains children notes for a note chosen in the left list. Any note can have only one parent note after its creation. But it can have more parent notes after adding references from other notes to it. (It can be done by using context menu options «Copy» и «Paste reference in new list» or by copying or moving selected references). In that mode you can navigate in hierarchy in direction of parent notes by paging back and selecting different parent notes. Root of hierarchy is depicted by "Home" icon in the left list. Paging back behind it is possible here if you select in the left list some parent note other than "Home" note (if available).

This mode is useful for stitching here from main navigation mode briefly to see all notes which have reference to one particular note selected in the right list, or show all tags or other attributes of this note assigned to it as parent notes.

Left list notes editing here have some restrictions, for it is prohibited to add parent note without creation of its parent note first. So some editing options would not be active. If you still need to use this mode for adding notes then page back the required list in right column where all editing options are available.

«One panel navigation» mode can be useful for showing in rows of list more text from notes than it can be seen in modes with two lists on the screen. Turning device in horizontal position can help with that as well.

«Two panels navigation» mode uses timeproof navigation method in two independent panels, which works in applications since the time of Norton Commander wide popularity. It is helpful for moving or coping notes between different lists of the same or even different documents, finding differences in two lists, or for sums of selected in lists notes comparison. Actions available in other modes present here as well. But some buttons of application bar are different in that mode if one of multiselect options is activated in actions menu. For example, editing have to be started from actions menu, for instead of "Pen" button, application bar provides "Move selected" and "Copy selected" buttons in that navigation mode.

Copying and moving can be done from the left list to the right list as well as in the opposite direction. Notes selection UI elements are visible in active list which can be activated by a click on any its note and if one of multiselect actions menu (on the right) options "Selection in list" or "Selection in list" is active.
The dialog with following four or less options should appear by a click on "Copy selected" button on application bar after selecting notes for coping:

References to selected notes

Selected notes

Selected trees

Selected branches of trees

«References to selected notes» option is available when copying inside one document only.

«Selected branches of trees» option is available when «Selection in document» multiple select option activated. Contrary to «Selection in list», that option lets you select tree branches without restriction to selection in active list.

Selection marks for successfully copied notes (subtrees) move from active list into destination list. And after an error, for example, if destination list has already coping reference, then selection mark for source note remains visible in active list.

There is "Copy" – "Paste tree in new list" edit mode copy option in all navigation modes for tree height restriction or control of new user functions creation for copying between documents (if the same user function already exists in destination document).

Dialog activated by «Move selected» button has only one option «Selected notes», which moves to destination list everything that was marked in active list. While moving inside one document, it must skip moving already existed in destination list references, or skip in the case of possible inaccessibility of destination reference as result of deleting path to it from hierarchy root. In moving between different documents, skipping can be done if moving note was already moved because it had been included in subtree of other selected note.

10. Multiple selection actions.

There are two notes multiple selection options in actions menu (pic.3).

Selection in list

Selection in document

The following actions are available with selected notes:

Copying

Moving

Deleting

Function setup

Showing sum for selected in lists notes.

There are multiple selection options in all navigation modes but actions can be different for different modes. Coping and moving are available in «Two panels navigation» and editing must be turned off. Multiple selection delete and function setup work in all navigation modes when editing turned on with the help of buttons on upper application bar. Showing sum of selected notes at the beginning of lists together with selected notes number works in all navigation modes and does not depend of editing mode.

Sum at the top of lists have to be visible if numerical values at the beginning of selected notes are present. For action menu option «Selection in document», number of selected in a list notes (L) and number of selected in a document notes (D) are shown in active list at the list start near the "Select All" checkbox like that "All L/D". Sum is calculated for all selected in document notes for «Selection in document» option and is shown in active list. And it is calculated for every list separately for all selected in lists notes for «Selection in list» option and can be shown in all visible on screen lists of one document.

Text editing does not work if multiple selection mode is active. (Buttons controlling notes adding and text changing are hidden in that mode).

11. Notes search.

Main approach for notes search in the application is using a menu of arbitrary hierarchy which suits your particular information placed as notes in a document. After such a menu creation notes search can be done just by choosing appropriate menu items in the left and right lists and paging forward to deeper levels in menu hierarchy. There is a bit more complicated in setup approach of search by

tags associated with notes, but in result it gives you a way to reach a note by many different note attributes (tags associated with a note). See "Step by step" instructions for practical recommendations and usage of both search approaches. It is available from application "Help" main menu option.

In full application version you can use other search methods as well. It is search by entering key words or sentences. Looking notes in sorted list of notes by documents or globally (sorting notes from all documents together). They are available by pressing button with magnifying glass icon on the application panel or from actions menu option "Search notes". You can choose different sorting types from actions menu opened by menu button on the right side of application panel. There are sorting by text, by text with first two words inversion (for people names search by their first name instead of search by last name), by numbers put at the note beginning, time of note creation, by note function (for example, if it's needed to see telephone numbers from all documents).

If document is encrypted then you have to open search UI from that document. Other encrypted documents will not participate in search.

Search results are shown on 2, 3 or 4 pages which can be navigated by paging backward and forward. After selecting one note in a list of search results, it's full text could be seen on the next page. And following next page shows a fist child-note of selected one (if available). It's parent note could be seen by paging back from a page with search results (if available). Those additional pages could let you know where in notes hierarchy the selected in results note is. In horizontal layout two pages can be seen on a screen altogether, and you can select a note from results on the left and see full text of it on the right without necessity of paging.

If you find searched note in results and want to go to it in notes hierarchy, then select it first in a list, and then press "OK" button on the application panel.

12. Multiple documents support.

There is an interface for new Milky Way Memo application document creation, deleting, choosing an active one from the list, observing its data version numbers and last time and state of sync for every document. All that is available from a dialog which can be started by "Choose document" main menu option (pic.2). New application document creation is available from "New document" main menu option as well.

Coping notes or tree of notes between lists of the same or different documents is available from context menu interface (see pic.4). For example, use option "Copy" first, then select new document (in a dialog opened with "Choose document" main menu option), and use context menu option "Paste tree in new list" selecting a new list by long clicking on its note or on empty list. But, possibly, you would find that more convenient way of coping notes is using multiple notes selection in two panels navigation mode. Panels can have different documents assigned to them in that mode.

13. Import and export of documents.

Import and export of Milky Way Memo application documents are implemented for device external storage (with possible access from other applications), as well as for cloud storages Dropbox and Google Drive. (Cloud storages import and export are implemented in full version only).

Export.

For export, please, choose "SDCard Export/MWM Document" from application main menu. The folder of the second option (as well as the first one) is accessible from file managers applications which can be installed on you device. The first export dialog option can be used for documents backup because files in it's folder are not removed on application uninstall. These two options match the following import options: "Download/MWM Import", "SD Card Import". The first option of export dialog can be used for documents exchange between Light version and full version of Milky Way Memo because its directory is available for export and import in both applications.

If attachments are present in exported documents then dialog with export exclusions options

should appear. By default, no exclusions are made in document export. But all video, all images, all attachments, or long attachments (more then 32 Mb size) exclusion options can be used to keep exporting fast and not storage memory consuming if needed. Just reset checkboxes of export options in that dialog to make some exclusions in export.

Cloud storage export can be done through syncing only, which is activated from a dialog opened from "Document Settings" main menu option (see chapter 16 below). In a first sync the document with all attachments is copied into cloud, in following syncs only new changes are copied.

Import.

For the import, please, select "Choose document" main menu option and then press button marked with "+". Then select options "SD Card Import", "Download/MWM Import", "Dropbox Import" or "Google Drive Import". New dialog should start. Select from the drop down spinner document file required for import. Its name is formatted as "documentnamedata.db" (Suffix "data.db" is added right after the document name). The last modification or creation date and file length should appear with file names in spinner's list.

In the case of importing from external storage you can import from two folders with paths which are shown in full in export dialog. Use "SD Card Import" or "Download/MWM Import" options for that.

In the case of cloud storage import the sync option for the imported document would be turned on as well. Such an import is possible if that document has already been synced beforehand (on some other device or on this one before been removed). For example, if the document was copied into the Dropbox folder "Applications/Milky Way Memo" manually (for example, someone gave it to you for importing and you put it into that folder) then Sync option will not be turned on after the import automatically. To turn it on, please, use the dialog opened by "Document Settings" main menu option. Preliminary, the original document has to be deleted from "Applications/Milky Way Memo" Dropbox folder to avoid sync error.

You can import documents from the folder specially created in a storage for Milky Way Memo application. It is named as "Applications/Milky Way Memo" in Dropbox cloud storage. And it is named as "MWM" in Google Drive cloud storage. Usually, it is created during first time of a document sync. But nothing prevent you from starting Dropbox import to create this folder which will be empty this time. You can manually copy documents in that folder if you wish.

During the first access to Dropbox after the Milky Way Memo application installation you will get offer to enter login-password from your Dropbox account or create the new one. Later you can be asked to allow storage access for the application to create and modify its files and folders. In the case of Google Drive usage, all needed storage accounts should be created in device system settings in advance. (But at least one account would be always available for it is used for working with Google Play market).

14. Import and export of contacts.

Contacts including people names, organizations, addresses and geo-coordinates, phone numbers, E-mails, SMS, MMS, chat addresses, web-addresses can be imported and exported between documents of Milky Way Memo application and device contacts database (Contacts application). It can be done by a whole list as well as separately. The import can be selected in Edit mode and export is selectable when editing turned off. Importing required to select list of notes where imported items should go. It can be done by long press on some note of the chosen list (or empty list). When the context menu appeared, please, select option "Import contacts" in it and then required import type in new Import Contacts menu.

Another contacts export options are available in full application version only. It is an export in vcard format (just one contact or the whole contacts list) into file with the name contactname.vcf (or MilkyWayMemo.vcf for the list of contacts) or vcard sending through Bluetooth, E-mail, MMS, Wi-Fi Direct and other available device interfaces. Vcard sending is implemented for electronic

business cards exchange possibility. *.vcf files Export directory path is the same as in the documents export case. It can be found in export dialog (it's second export option text). Choose "SDCard Export" from the main menu. After receiving such *.vcf file on some device the contacts from that *.vcf file can be exported into contacts database (for example, you can use Contacts application on Android device).

15. Export of notes in CSV text format.
(Available in full version only.)

Data gathered in notes can be used in other applications on mobile devices as well as on desktop PC if they support import form CSV text format or some other format in which CSV text can be converted. For example, Microsoft Excel supports CSV text import.

Please, use main application menu option "CSV Export" to export notes data in CSV text format. In dialog opened you can select a data table for export. All user data are placed in 3 tables "Notes", "Notes links" and "Functions". In the simplest case when only notes text are at importance it's enough to export first table only. Other options to change in that dialog are table columns dividers and table rows dividers if default values (tabs and CRLF which useful just to read text on PC with Windows OS) do not suit you.

The following information about tables with their columns can be useful in implementation if notes import to database. Some more technical details of CSV export of Milky Way Memo data tables is presented below.

Table «Notes».

Columns:
id (PK), function (FK Functions.id), date, note's text

Table «Notes links».

Columns:
id, parent-note (FK Notes.id), child-note (FK Notes.id)

Here the root parent-note has value of 0. All first level child-notes are connected to it. Column id is useless, most likely. It is not connected with other tables.

Table «Functions».

Columns:
id (PK), color, function name

16. Dropbox, Google Drive sync with working in groups support.
(Available in full version only.)

Documents sync with Dropbox or Google Drive cloud storage is supported on multiple devices (up to 256). The application was designed to support working in groups. In the case of one user with many devices the idea was not to force syncing on every device change (it is desirable though). Thanks to this design, for example, no text entering work can be lost in "conflicted copy" file after Dropbox syncing. Sync conflicts appearing is minimized and text entering work you've done never goes down the drain because of sync conflicts. You can observe and edit list of conflicts if such

occur, for example, during intense group work. (Choose "Sync Conflicts" from the application main menu). Conflicts resolving is automatic, but it's possible that you have to repeat Delete operation, choose variant of conflicted text editing or assign a function to note again. Such kind of conflicts must not occur often. Working on one device only never causing sync conflicts. Probably, you will never even meet them with right notes hierarchy when necessity of editing the same note by different people is minimized.

By default documents sync is turned off. To turn it on, prove that internet access is present, choose option "Document Settings" from the main application menu, activate dialog check box "Sync" and choose "OK" button. You would get offer to select cloud storage (Dropbox or Google Drive), to check or uncheck option "Auto sync". The last option lets start auto syncing on some events such as new documents open (up to 4 times a day) and edit mode exit. When it turned off you will have option to sync document manually only. Choose actions menu option "Sync".(This option is disabled if there is no internet access). In the first Dropbox access you will get offer to enter login and password from you Dropbox account or create the new one if you still have not done that. You can be asked to allow storage access for the application to create and modify its files and folders. In the case of using Google Drive storage all needed storage accounts have to be created in system device settings in advance. Then the new folder in your Dropbox would be created to work with documents of Milky Way Memo application, if it was not created before. (Folder "Milky Way Memo" - in the "Applications" folder). Folder "MWM" would be created in the case of using Google Drive. The application will be able to work with documents from those folders only. It will not have access rights to other files of your storage account.

Information about sync activity, sync errors and conflicts presence is shown in device notification panel. "Sync Conflicts" form is opened by click on those notifications. This form can be entered from main menu as well.

After you synced you document on your first device, you can share it on other devices. To be able to work with it and modify it on other devices use "Dropbox Import" or "Google Drive Import" options available from dialog opened by "New document" option of the main application menu. The sync option will be activated automatically after document import from cloud. (See chapter "13. Import and export of documents".)

17. Working with multiple Dropbox and Google Drive storages.
(Available in full version only.)
Starting with application version 2.0 every synchronized document in application can be tied to its own cloud storage account. It can be useful when document sharing with different people is required. Different group projects would require different cloud storage accounts to let account access to required people only and keep your private account separate from different group accounts.

Syncing a new document.
The first account used for documents sync or import becomes application default account. Since that, if synchronization setup in document settings dialog "Active Document Settings" requires using other storage account, then check "Use other account" checkbox before pressing "OK" button. The possibility of login and password change would be granted for Dropbox to setup document sync with a new storage account. And other account from accounts set on device would be selected in the case of Google Drive. The new account is linking to document and you would not be asked to enter login and password to sync this document on this device anymore (Oauth 2 token would be used automatically for authorization purposes).

Importing a document from cloud storage.

You can change default storage in dialog titled "Import from Dropbox" or "Import from Google Drive" by a click on the line "Use other account". The other documents list for import from other storage would be offered to you in the same dialog. Entering login and password for Dropbox storage or Google Drive confirming application access to its files and folders would be required for first time new account usage.

The option "Use other account" has non-permanent effect on account selection, and it does not change application default account. If you have to enter some particular credentials often then use "Default account reset" application setting option to reset and then change of default application account to account with particular credentials.

18. Private information protection with password.
(Available in full version only.)

To work with confidential information encryption with password of Milky Way Memo documents is provided. Every document can be encrypted with it's own password or left without its password set. The protection level can degrade considerably when choosing short or trivial password. You can regulate applied security level by choosing password appropriate for that level. To not degrade protection level it's not recommended to use passwords shorter than 8 symbols, trivial passwords, passwords which can be associated with you.

Document encryption can be activated by choosing application main menu option "Document Settings".

Such operations as setting, resetting or changing password can take a lot of time for documents with attachments of large size. It is recommended in this case to increase time of device work without going to "sleep" state. But if device went to sleep or its battery got discharged during changing password setting then do the following when device starts working again.

1.Open document for which password setting was interrupted.

2.Open dialog "Document Settings" form main application menu. After that, operation have to be resumed again form the interruption point.

It is prohibited to change encryption settings of a document with activated "Sync" option in current application version. So, to change password or turn on/off "Encrypt" option, please, follow this procedure:

 1. Sync changes on all devices for that document.

 2. Sync document to the last version on some device and turn off "Sync" option.

 3. Change encryption settings on that device.

 4. This step (4) is required for application version less then 1.8. Skip it if you have 1.8 or newer version.

 Delete this document from Dropbox folder "Applications\Milky Way Memo" (two files: "docnamedata.db" and "docnameslog.db" for the document with the name "docname").

 5. Turn on "Sync" option on a device with changed encryption settings. For application version 1.8 and above, the dialog should appear with warning about existing document with that name in Dropbox or Google Drive storages. Choose "Yes" to approve replacing those files with the new ones with password changed.

 6. Delete this document and then import it from Dropbox (or Google Drive) again on all other devices participating in this document syncing. "Dropbox import" and "Google Drive import" activate sync option as well. These operations are available from a dialog which can be opened from "Choose document" main menu option. (Buttons with "–" and "+" signs).

Organizer with multiple functions.

19. Schedule and reminder.

This functionality is created to help with events planning as well as reminding about approaching there time.

It is possible to work with schedule observing events list sorted by events time, assigning and reassigning events time to new date/time, or dismissing events. Dismissed events go to separate list from which they can be accessed for information in the future and letting reactivate events back with new time quickly if it's needed. It can be done by assigning them new date and time, but it's especially quick to reactive an event of repeating type. Just swipe an event in events list from right to left for shifting time forward, and swipe from left to right for shifting time back. Swiping in schedule list not repeating events in any direction would just dismiss them. For dismissing events, use actions menu option "Dismiss event" from schedule list of active events.

Other helpful possibility is to setup of reminder – notification in device's system panel with option of using sound, melody, vibration.

Notifications and schedule events are just ordinary notes with a date set and one of reminder function set. Dismissing events is done by assigning function "Dismissed reminder items" as well. Such notes from all documents go to schedule – list of planned events sorted by there time. Event time approach and time passed after it are shown in events list by color gradient. The days number from event when to start showing color gradient (14 by default) can be changed in application settings.

It is possible to set a reminder for schedule events to show reminder notifications on device notification panel and status bar with option of using sound, vibration and LED indication. You can use a sound chosen on your device for alarm, for notification, or as a ringtone.

UI of "Schedule and reminder" form takes up to 4 pages. There is a page with full text of selected event next after events list page. In horizontal layout those two pages can be seen on device screen altogether, and you can select event in a list and see it's full text description on the right page. It's possible to have additional event information in a child-note or in a parent note. To access that information easy and understand where in notes hierarchy the selected event is, you can page back to event's parent note and page forward to event's full text page and next to its first child-note. For example, in defining date of birth event, Last and First name of a person can be put in its parent note.

Reminder functions define the repeat patterns for events of schedule. There are a standard patterns such as one time, every day, every week, every month, every year, as well as customized in application settings patterns, such as particular week days, even and odd days, work and holiday dates, particular chosen dates.

Function's specific flags could be set for notes with reminder function assigned, to define reminder attributes such as melody, vibration, LED indication. And following reminder types are supported

No notifications

Notification alarm counter

Dismissible from panel notification

These notifications appear in device notification panel as well as application status bar. By clicking on such notification you can open schedule list with corresponding event selected, which could be now dismissed or just read thoroughly. Starting events dismissing mode by this click could be turned off in application settings in "Schedule and reminder" section. "Dismissible from panel notification" can be dismissed just by swiping from device notification panel. Use "No notifications" notification type if you need to turn of notifications for some event which could be used as schedule event only.

Reminder is set by default to "Dismissible from panel notification". This default value can be

changed in application settings to any one from three options just described. All reminder attributes can be set by using "Schedule and reminder" UI, as well as by usual noes edit UI when assigning notification function to a note or by click on button with bell icon on it, which should appear on the right from functions list.

Samples of using reminder could be found in "Step by step instructions" document which is available by choosing "Help" option of application main menu or by this link step_by_step.html.

20. Planning.

Wide spread Kanban method of planning based on moving tasks-cards (app. notes) between work process stage columns on Kanban-board (lists of notes in app. document) is supported in this application. Its base use was possible in earlier versions as well. But tasks priority assigning is available for planning starting since app. version 4.2 when Eisenhower Matrix planning tool was added.

Three priority flags like "Set priority", "Important", "Urgent" can be set in notes edit interface from a dialog activated by "Bell" button. This button was available for schedule event notes only earlier, and now it can be used to activate priority setting dialog for any note with custom function set. One more priority flag of "Deadline" status becomes available for schedule events only. It can be set by editing/adding schedule events notes altogether with their other flags.

The set priority is shown on cards-notes by special pictograms of state such states as important, not important, urgent, and by separate pictogram of sand glass to mark deadline status of schedule events set. The pictograms are like these here:

Context menu activated on notes with custom function set has new options to select which priority state is needed to be shown on notes to attract more attention. So some of current priority state pictograms can be hidden and some of them can be shown. Those options are as following:

- All with priority set
- Mark important only
- Mark not important only

And search form has new options to filter notes in search results list by Eisenhower Matrix priority set or by deadline status set:

- Tasks with priority set only
- Deadlines only

21. Geofences and tracks.

Geofences can be usefull in reminding about incidents of not time but space significance. For example, you have no intent to drive to some place specially, but if by chance you get into nearby place then you would like to be reminded about things planned to do in that place. Or geographic track recording is required in geofences defined beforehand...

Tracks recording can be started without using geofences as well. Coordinates are recorded in separate "Notes with current geographic location coordinates" (see description above) linked from a track-note. So it is easy to add information connected to locations just by editing notes with

coordinates. It can be added even in other notes tied to a note with coordinates. It's possible in the app to edit and viewing your markers' descriptions directly from map, for example, while travelling or walking on a route.

Any note can be transformed to geofence or track after assigning to it a proper function. Text in such a note is regarded by application as geofence's title (or its description) and data-time defines a moment of starting to execute its function. New notes are created with current time by default, so it's needed to setup time by hand to add time restriction. In geofence editing, it's required to setup one coordinate with radius as a minimum and it's desirable to add title text after a space symbol. That title text will be shown in notes lists instead of full edited line, but if no title is provided then coordinates and radiuses of geofence circles will be shown.

geo:-20.88092837022,132.35624346 74470 title

Here it is a geofence note example, where
-20.88092837022 - latitude
132.35624346 - longitude
74470 — circle radius (in meters)
title – geofence title or description text

But coordinates and radiuses text editing is not required, for this can be done with a graphic interface for Google maps. For example, open main application menu and follow selection below to start adding a goefence:

1. "Geofences and tracks" (main menu option)
2. "Add new geofences" ("+" button)
3. "Create new geofence on map" (another "+" button)

The simplest geofence is a circle with radius and center coordinates defined. More complicated geofence can be created form several circles which can intersect or not. Circle with a marker in its center and a radius depended from current map scale is created by clicking on a map in "Edit" or "Adding new" mode. The map scale can be changed with squeezing or widening gesture, or by double click on a map for approaching, and by click with double finger for moving away from a place on map. After that, circle moving on map surface can be activated by long click on marker. (When activated the circle will jump up to avoid hiding map space under the finger moving to a new position). To change the circle radius, please, use buttons "r-", "r+" on the top translucent panel, or actions menu activated by button on the top and right. To delete a circle, select it by clicking on it and then click on button "X in circle" on the top translucent panel. To finish coordinates and radius of geofence definition click "OK" button, and for canceling use "<" arrow on the same panel on the left, or use device button "Back". Now you should return to main geofence editing form (which is resemble to a form of schedule events editing). Here you can add geofence title or description text in a field below of "Location and radius" field, setup function executing start date and time, if required, and setup reminder and tracking operated by geofence.

Reminders:

Inside geofence

Outside geofence

Crossing border, dismissible

Entering, dismissible

Exiting, dismissible

Geotracking:

Inside geofence

Outside geofence

Start track recording

Start, notify, stop

Two first reminders are showed in device system panel as "this type reminder counter" and not required of manual dismissing. When the reminder condition goes away the reminder will be removed from the system panel by the application, but if you need to dismiss-deactivate then deactivation can be done with swiping from geofences deactivation form. Just click on the reminder to go to geofences deactivation form. Three the rest reminders can be dismissed by swiping just form device system panel. But that will not be a geofence deactivation. That will be only a reminder reading confirmation, and geofence will be able to trigger new notification next time its condition is present. If you need deactivation, click on reminder first and swipe it from the geofence deactivation form (this geofence in a list of deactivation form should be selected already).

Geotracking of the last type «Start, notify, stop» is supposed to be used in circling, running, walking on a path known in advance, when circles of geofence are placed in required locations sequentially on a path length. Tracking will be started inside any circle of geofence, and will be stopped when exiting from the last one defined for geofence, reminders can be triggered by any of its circle. For example in sport competitions for setup of notifications with sound about passing some defined marks, and track recording.

The following settings operate of coordinates measurement period while tracking and accuracy of determination entering into geofence time.

Location time period:

0 s

If supported 0.5 s

Sport 1 s

Sport 2 s

Regular 10 s

Regular 30 s

Regular 1 min

Economy 5 min

Economy 10 min

Economy 30 min

Economy 60 min

Economy 120 min

Location distance period:

0 m

Small 1 m

Small 10 m

Medium 100 m

Medium 200 m

Medium 500 m

Medium 1 km

Long 10 km

Accuracy of determination the moment of entering into geofence can be changed by setting location time period values up to 10 s and 10 s included. These values works near geofences only. Application tries to measure locations as less as possible when your device moves away from a geofence for battery charge economy purpose. The rest time period values have meaning for track recording period only.

Location time period is suited best for battery charge economy control. For its economy it should be avoided to set this period less then value of current task requirements. Location distance period affects battery charge economy not much, because location provider will need to measure locations often enough to calculate distances, even if these measurements don't go into track, but this setting is very useful for tracks memory economy and to keep track length under control. Very long tracks can produce breaking and lagging while working with map. (Disabling showing on a map all track markers from actions menu can help in that case). Distance period set can be especially helpful in the case of possible long time stops in movement. 0 values for periods have meaning of not set measurement period restriction, which will be restricted still by location provider implementation on the device. Most of all, time period set less then 1 s is not supported on devices and will be equal to 1s period. It is prohibited to set both periods to 0 value simultaneously.

Select "OK" button or big button with "+" under text fields to finish editing and saving results. Press arrow "<" on the left on the upper panel or device button "Back" for canceling editing and exiting from geofence adding form. For canceling and continuing adding new geofences – just click on button "Clear" or select other geofence in the list on the left page (in vertical layout you will have to page back 1 time) to start new geofence definition on the basis of existing geofence from the list.

Open form "Geofences and tracks" from the main application menu and activate "Tracks list" sheet then select actions menu option "Start new track" if you need to start track recording without definition of its place in document menu and notes hierarchy. Track is created in that case linked to active document root note "Geofences and tracks". After stopping the running track, it can be moved to any location of the same or other document with the help of "tree" copy and paste (context menu option of editing notes mode "Paste tree in new list").

Add a note, as usual, with a text of track title (or its description) to create new track in defined place of notes hierarchy in a document. Start notes editing mode with "Pen" button on the actions bar of main application form, enter text, and before pressing "+" button select "Geographic track" note function. Exit from notes editing mode. Activate context menu by long pressing on this note in a list and select one of options "Setup tracking", "Start tracking", "Restart tracking" (Appearing instead of "Start tracking" if other track recording is turned on). "Stop tracking" context menu option would be available if this track recording is turned on. The same context menu options are available by long pressing on track items in a list of "Geofences and tracks" form. "Setup tracking" will let you set your own track recording time and distance periods instead of default values (1 min time period and distance period not set).

User interface of "Geofences and tracks" form is similar to "Schedule and reminder" interface with exception of some elements required to operate of track recording and geofences reminder type selection. It, the same way, can be spread in 4 sequential pages maximum. The main list contains geofences from all application documents sorted and colored according to distance from current device location, instead of schedule events. The blue line separate restricted by time geofences

which not start its work yet. These geofences down from the blue line are sorted by time. After starting working, the time in geofence is updated when the event set for the geofence occurs. It is updated to the time of that event. Quick geofence deactivation by swiping it from a list is present here as well, the same way as for schedule events. Click a "Pen" button on a page with geofences list to open geofences deactivation form. Click on radio button "Inactive" and select required geofence from a list, then click a "Pen" button to activate geofence edit mode and clear checkbox "Deactivate", finish editing with OK button if you need to activate a geofence back. Now that geofence would work again and it can be seen in a list "Active".

There are tracks from all application documents shown on sheet "Tracks list", as operated by geofence settings as well as turned on and off manually. They are sorted in a list by a time of track start shown in the first column. This value is usually a time of thirst location measurement, and it can be an expecting time to start recording set for a note with track function if there were no measurements yet or if new expecting time to start recording was set with a value behind the time of first measurement. Blue line in notes list separates tracks which is restricted by time and can start recording in a future only, but tracks have to be turned on first to be active. Only one track can be active in any given moment. Tracks activated by user have a priority compared to tracks operated by geofences. And among them, the last turned on track becomes the active one. Tracks with turned on state are colored in second column of tracks list with tint of red. One turned on track can be colored not only in second column of a list but for a full row if geofences and tracks service (MWM geofences) started, tracking for a document with that track is enabled and recording is not restricted by time. That is working state of a track. And number of location measurements for that track in the first column of tracks list just under line with start time should begin to grow.(But this form does not update automatically). If adding coordinates does not occur then, please, check if location service providers are enabled in device system settings. At least one provider (GPS or Network) must be enabled. The best results for tracking can be achieved if it's possible to work with GPS provider enabled only.

Coordinates of a track are recorded in separate notes to let easy adding description to every its measured location. So it's possible to see increase in number of notes tied to a note with "Geographic track" function for working track, but that is not in "Tracks list" sheet but in main application form with left and right lists of notes. Select active track in a list of "Tracks list" sheet by a click and press "OK" button on upper panel to return to main application form, new document can be opened after returning to main application form if selected track was created there. The document name can be read from main application bar (at least in horizontal screen layout). It is possible to describe every measured location in notes edit mode, as usually, by adding any text in edit field separating it with space symbol from coordinates line. But it is much easier to do it from a map with track markers, for it would be clear there where such a description is required and where is not.

Go to sheet "Tracks list" and select required track by a click in a list. Press button "Show geofences and selected track on map" on the main application panel. The map with selected track and markers in the center of the screen should be opened. There are options of selecting a map type and hiding redundant map objects in actions menu activated by menu button on the right on the application panel. Show or hide geofences of particular type, hide all track markers, or hide markers without your description only. Setup the required map scale such that track markers become separated on a map surface. Track markers would become selected by the first click on them, and balloon with description text, time and coordinates would appear on top of it. The common description of a track from a note with "Geographic track" function would appear if particular location description is not added yet. The description editing form would appear by a click on selected marker if description is not set, and description viewing form would appear to show already available description. It's possible to go to edit mode from description viewing form by a click on a "Pen" button.

On the main application form in the left and right lists the fragment of added like that description is shown and text of geographic coordinates is hiding, but you still would be able to see full text

with coordinates for selected in lists note in viewing and editing field on the main form.

Transitions from a note with track coordinates on the main application form to a track marker on a map and back can be done like that:

1. Select a note with track coordinates on the right list.
2. Assuming that note with track name and "Geographic track" function would already be selected in left list. Activate a context menu by long pressing on this note.
3. Select option «Show track on map». Map with selected track in the center should appear on the screen.
4. Setup map scale to see track markers on a map separated. Desired marker should appear colored green.

For transition back:

1. Select required marker on a map by a click. It should change color (green).
2. Select «OK» button on translucent panel on the right. You should see notes in list at the moment. Note with Selected track should be in a left list and note with relevant to green marker coordinate should be selected in the right list.

22. Widgets.

Widgets are placed on device home screen pages and can provide the following benefits.

1. Fast notes creation with buttons tool. There are microphone, text, photo, video, adding schedule events (bell sign) buttons available with widgets.
2. Convenient viewing most actual notes and images just on device home screen. Or quick access to most often used notes and attachments from any application documents with instantaneous move to selected note in application.
3. Special grouping of any notes and images from application documents for short period of time usually, just on home screen. For example, showing there interesting images, information required to work on current tasks, e. s.. Items can be removed from a group easily (unpinned) and pinned back again. That provides functioning like a checklist or shopping list additionally.

Any widget can be combined from the following elements.

• Widget name.
• Fast notes creation buttons panel.
• List or cards with notes or images.

Settings of sizes on home screen and setting of other appearance parameters (widget name color, notes text color, background color, transparency, text size, visible text lines number) can be done in "Widget settings" form. You can find there 3 radio-buttons of quick appearance selection. Exact appearance options of these selections can be edited in "Application settings" in advance.

You can see "Widget settings" form first time in a widget creation process (pic. 6).
"Add apps and widgets" button should appear after long click on some empty space of home screen pages. Activate it, and you should see pictograms of widgets available on device for creation. If you have already placed widget on home screen then it is still possible to change widget settings. Sizes and position on screen edit mode can be activated by long click on widget. At the top part of the screen "Edit" and "Remove" buttons should appear. Drag widget to touch "Edit" button to activate

"Widget settings" form, and drag it to "Remove" button to remove it.
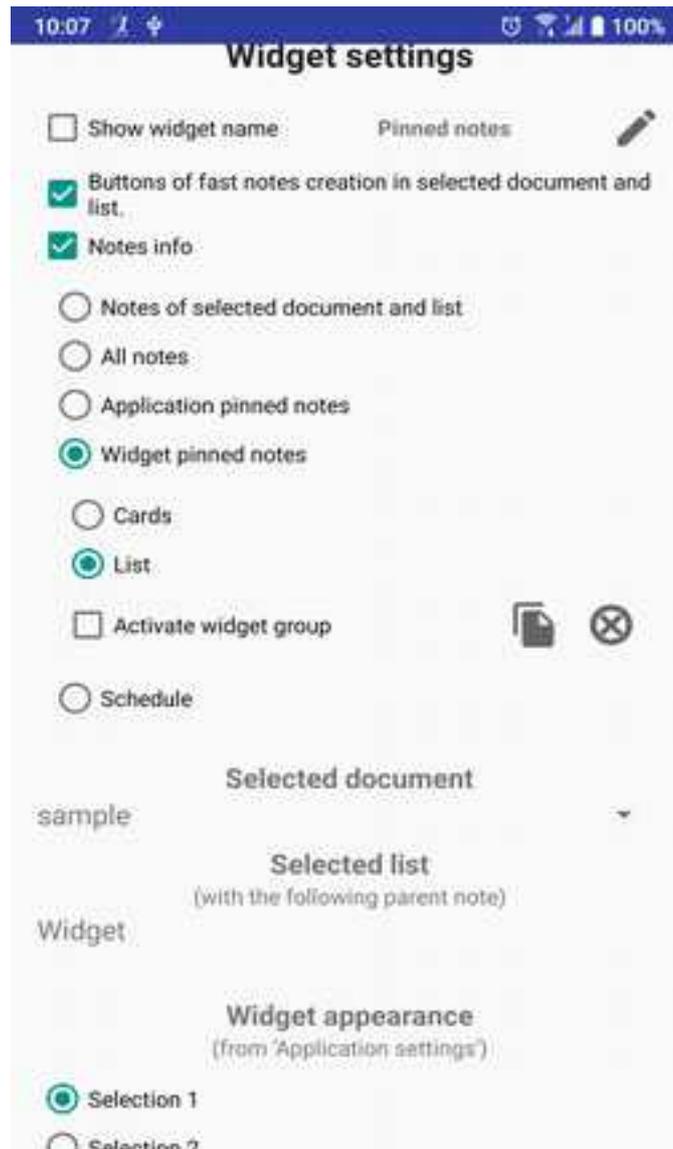
Pic. 6: "Widget settings" form appears first in widget creation process and in widget editing.

Four widget types are available. They all have different set of notes placed on their list or cards.

- All notes.
- Notes of selected document and list.
- Schedule.
- Pinned notes.

In widgets list and cards you can see text notes (appearing the same way as they are in main application lists together with a date) as well as separate images. You can select any images from attachments and any text notes to show them in "Pinned notes» widgets. Other widget types have a priority to show text with a date. And you can see text and date in case when text is available. It will show first image attachment of a note if text is empty only.

All notes.

Notes from all application documents in one list in reverse order by time associated with every note

(Last notes will be at the top of the list, at its start).

Notes of selected document and list.

This one is useful to work with notes from one list of a document selected for the widget. Several widgets of this type associated with different documents could be created. For example, to fast notes access and adding information fast to particular tasks. (Last notes will be at the top of the list here as well).

Schedule.

Schedule events can be seen just on pages of home screen if you are using widget of this type. Fast move (by one click) from here to selected event viewing form (text together with images and other attachments) and following move (by second click on "bell" button) to its editing (dismissing, adding or removing reminder, editing date, e. s.). Here the most closed by time events (or passed not dismissed events) should be viewing at the top of the list as it is expected from schedule events. It is possible to setup using a list or cards with widget of this type.

Pinned notes.

Any note can be pinned to "Pinned notes" widgets on home screen (and be unpinned from it later). |"Pin" and "Unpin" options can be found in actions menu of main application form with notes lists as well as in actions menu of one note viewing form. These options can be used without widgets as well, just to mark selected notes or attachments. (Note will show small pin sign just before the date, and attachment info will show it as well if attachment was pinned). Image of any selected attachment with picture (image or video) can be pinned and shown on this widget as well.

"Application pinned notes" group is active by default. And all notes from this group can be seen in one list or on stack of cards of a widget selectable by radio-button with this group name. The group does not depend of widget lifetime. So you can continue working with the same pinned notes after widget removing and creating it again.

Other groups belong to widgets and they are selectable by "Widget pinned notes" radio-button. Lifetime of such groups is defined by lifetime of its widget. You can create as many widgets as your home screen space allows. For example, for any project or task or for shopping trip – new widget with its own notes and images. Group of notes information is deleted after widget removing, and it would be an empty widget after its creation anew. But it is possible to use button "Copy" which fills widget with notes form currently active group if it is needed to base new widget on notes selection from one of existing group.
 These groups can be activated one by one (checkbox "Activate widget group") to use "Pin" and "Unpin" application interface options if you need to select existing notes or images for particular widget. To return application interface to work back with "Application pinned notes" (default group) you can deactivate checkbox "Activate widget group" in "Widget setting" form of a widget with active group or from "Application settings" (option "Active group of pinned notes" in category "Notes view mode"). Use widget "Buttons of fast notes creation" if you need to add new notes or images to a widget which is not required groups activation.

23. Predefined functions for your notes.

Wide set of predefined functions is available. They can be used to assign to notes some predefined properties.

```
One time Reminder
Every day Reminder
```

```
Every Week Reminder
Every Month Reminder
Every Year Reminder
Children Sorting
2 Words Inversion Children Sorting
Children Sorting by time
Children Sorting by function
Work days Reminder (set 1)
Holiday days Reminder (set 2)
Chosen days of week Reminder (set 3)
Chosen days of week Reminder (set 4)
Chosen days of week Reminder (set 5)
Chosen days of week Reminder (set 6)
Chosen days of week Reminder (set 7)
Chosen days of week Reminder (set 8)
Chosen days of week Reminder (set 9)
Dismissed reminder items
Contact name (Last First Second)
Organization
Phone number
SMS
MMS
email
chat address
Web address
Geo-coordinates, address
Geographic track
Geofence (reminder, tracker)
Inactive geofence
Sum by children
```

Цвет по умолчанию основной панели приложения, фона для интерфейса, текста в полях просмотра и редактирования заметки определяется выбранными темами, но может быть также задан явно в настройках приложения. Остальные цвета определяются выбранными темами. По нажатию на кнопку «Сброс настроек общего оформления» восстанавливаются первоначальные настройки, определяемые темой «Светлая с тёмными панелью и меню». Изменение цвета текста при совпадении с цветом фона в полях просмотра и редактирования заметки не производится, т. к. это возможно только при ручном задании обоих цветов, что можно легко избежать.

These functions can be assigned to a note just from main note edition mode, and some of them related to schedule and geofences can be assigned additionally using main application menu options

"Schedule and reminder" , "Geofences and tracks". See this document and "Step by step" for info about using them.

24. User functions for your notes.

There is a possibility to create user functions with definition of background color to assign to a note and definition of sum's name for sum which can be calculated for all notes grouped under function with that name. To create user functions choose button with "gearwheel" icon next from functions list. It is available in "Edit" mode.

25. Actions with notes.

The following actions are possible with a current chosen note in a list (right or left lists) aside from simple viewing and editing (use context menu options available for the chosen note):

1. Copy text to clipboard from editing area (in edit mode).
2. Send to other application (for applications registered for accepting of text information).

Some of them can be used as contact info and more. (For more info about them see "Special notes formatting" which follows).

1. Use as a template for sending Email, SMS, MMS with address (phone number) and text defined in selected note.
2. Call by number defined in chosen note.
3. Show on a map postal address, some place address or geographic coordinates defined in chosen note.
4. Show geographic track or geofence from selected note on a map.
5. Open a link defined in selected note in web-browser installed on device.
6. Show file by reference to file on device sdcard in a note.

Note creation date and time are included automatically. This date can be edited if needed . Use for that context menu option "Change date" (see pic.4).

26. Sums calculation.

It's possible to calculate and present in table form (name – value) of different sums of numeric values from the notes (at the beginning of a note) including custom formulas use. Calculated sums can be seen in a form activated from main menu option "Sums". Sums calculation can be useful to know the balance and expenses while traveling. For example, if you were traveling in Russia in 2007-2008 the results could be like ones presented in the document "sample". (see /Accounting/Money/... in that document).

Sums are available for all time period as well as for defined time periods. Every note has time value assigned to it (note creation time by default). You can see it in note's second line in the notes lists. So this time is taken into account when decision is needed to include or not include particular note value into calculated sum.

If a note starts with numerical value (just note consists of integer number or floating point number or with adding to number some text after space symbol) than such a value can participate in sums calculation. There are 3 ways of sums calculation which the Milky Way Memo application supports.

1. Activation one of two multiple select options in actions menu and selection notes for sum calculation. Just after selection, sum have to appear at the beginning of active list near selected notes number. That sum is temporary and it does not go to sum table which can be shown by using main application menu option "Sums".
2. Assigning user function to a note. Then the sum with name the same as that function name is calculated. And its value have to be equal the sum of all values from notes with that function

assigned. This method is useful for simple sums calculation, and when there is no distinct hierarchy of notes participating in calculation. So that notes can appear in any part of the document. No support for user formulas settings available for this method.

3. Assigning "Sum by children" predefined function to a note with a text which defines the sum's name. Such a sum is calculated for direct children of this note. If there is a note with function "Sum by children" among it's direct children than the sum calculated for that note's children will be taken into account as well. Numerical value which starts a note with function "Sum by children" is not included in any sum and appears just as part of sum's name. This method of sum calculation is good for notes organized hierarchically. For example, a "Balance" consists of "Income" and "Expenses" which are subdivided to "Living expenses", "Transport expenses", "Medical expenses", "Entertainment expenses" and so on. More complicated calculations with the use of custom formulas are supported here as well. It's possible to create a formula-note among the children of the note with assigned function "Sum by children". This formula-note will change the sum calculated for other children (siblings) on the custom way where sum of all siblings included into that formula as predefined variable "@sum".

For example, in balance calculation to apply minus sign to "Expenses" sum you can use the following formula-note putting it among children of the note "Expenses".
formula=-@sum , will cause the operation @sum = - @sum, so it will change sign of the "Expenses" sum to negative. (see Accounting/Money/Balance/Expenses/formula=-@sum in document with the name "sample").

 It's allowed to create sentences with predefined variable "@sum" and numerical constants using following operations:

$\qquad$ (,) parenthesis

$\qquad$ + addition

$\qquad$ - subtraction (or value sign changing)

$\qquad$ * multiplication

$\qquad$ / division

For example,

$\qquad$ formula=(@sum-20.5)/60

will do operation @sum = (@sum-20.5)/60

For example, to convert sums from rubles to other currency you can create set of conversion formulas (see /Accounting/Money/Currency exchange/ in the document "sample"), and use one of them as reference inserting it in the list of children of a sum required to be converted. Use "Copy" and "Paste reference in new list" options from context menu to do that.
(see /Accounting/Money/Balance (EUR)/ and /Accounting/Money/Balance ($) in the document "sample"). That provides you with possibility to recalculate to new exchange rate by changing the formula coefficient (64.05) in one place only (see /Accounting/Money/Currency exchange/Conversion from RUB to/EUR/formula=@sum/64.05 in document "sample"), and all the references to that formula will reference now to updated formula value.

27. Special notes formatting.
Some actions from context menu started by long click on a note will not appear as an option in that menu if that note is not prepared the right way. The simplest way to prepare a note to carry some action properties is to assign a note predefined function from "Function" list in edit mode. But

sometimes it's not enough. And sometimes it's not desirable to change function for the sake of some action possibility. (For example, you want to keep the note's background color unchanged). In that case you can edit the note with special formatting. Aside from actions, note format is important in the case of exporting contacts to device's database or vcard files.

Special formatting appropriate for different actions are presented here. (See the samples of such notes in document "sample" /Special formatting/...). It's prohibited to separate prefix with a space symbol, when applying prefix to a note text with special meaning, but space is needed before regular note text if it is present.

- Action "Browse" (function "Web address")
This action can be recognized by simple attributes such as dot sign. But It's better to start note with a prefix 'http://' or 'https://' (if required in the case of SSL) to have a single meaning.

- Action "Call" (function "Phone number")
- Action "SMS" (function "SMS")
- Action "MMS" (function "MMS")
All t5hose 3 actions required of recognition of phone number at the beginning of a note. Start such a note with prefix 'tel:', 'mms:' or 'sms:'. Alternative variant exists as well. That is a requirement for a phone number to contain only the following symbols '0123456789()-' and to be started with sign '+' and to be in a range from 10 to 15 digits.
- Action "Email" (function "email")
Here it is enough to start note with email address or with a prefix 'mailto:'.
- Action "Map" (function "Geo-coordinates, address")
This action required entering geographical coordinates or an address (full postal address or simplified address of some place). Use prefix 'geo:' at the beginning. Here are the descriptions of acceptable formats:

geo:latitude,longitude

geo:latitude,longitude?z=15 - here scale is defined as well

geo:latitude,longitude(Name of the place) - here entered name of the place will be shown on a map. (It's impossible to define a scale and a name of place altogether, unfortunately)

geo:Street address, City, State, Zip code

geo:City, State

geo:Street address, City

- Action "Show file" (no corresponding function)

Please, use the following prefixes to reference real file on device (text documents, pictures, e.s.):

/external/path from the root of external storage, which is visible on PC while device is connected to it through USB.

/external_files/external storage path from the root of application "Milky Way Memo" or "Milky Way Memo Light". (/external/Android/data/com.mwmemo.pro/files/, /external/Android/data/com.mwmemo.light/files/).

file://full path to file on device. This prefix is not recommended to use without special needs, because it is required knowledge of device storage mapping and full paths of storages on device, which can be different for different users (if multiuser mode is set in device settings)

and even for different device manufactures. (For example, sometimes it's possible to use «file:///sdcard/» instead of «/external/», and sometimes «file:///storage/emulated/0» would work when using it instead of «/external/»)

For example, in document "sample":

Help//external_files/mwm.html

Help//external_files/mwm.pdf

Help//external/Android/data/com.mwmemo.pro/files/pic1.png

Contacts formatting.

For contacts export, it's important what kind of suffix stands after phone number, email address, chat address. This suffix can be converted into contact type in "Contacts" application (see below). Allowed phone number types are presented here (suffix followed the phone number after the space symbol in note and corresponding phone number type in "Contacts" application on your device):

h. - home

m. - mobile

w. - work

f.w. - fax work

f.h. - fax home

p. - pager

no suffix - other

Any other – custom type

Allowed email address types are presented here (suffix followed the email address after the space symbol in note and corresponding email address type in «Contacts» application on your device):

h. - home

w. - work

no suffix - other

Any other – custom type

Allowed chat protocols are presented here (suffix followed the chat address after the space symbol in note):

AIM

Google Talk

ICQ

Jabber

Windows Live

Netmeeting

QQ

Skype

Yahoo

Any other – custom protocol

The sequence of words is important for a note with functions "Contact name (Last First Second)" and "Organization".

Formats for a note with function "Organization".

Position, Organization

Position,Organization

Format for a note with function "Contact name (Last First Second)".

Last_name First_name Second_name

The unknown last name have to be replaced with space symbol, for example:

" First_name Second_name" (Here, the additional space symbol goes before first name)

" First_name" (Here also, the additional space symbol goes before first name)

"Last_name First_name" (Here, the additional spaces not needed)

Such format makes it possible to sort names correctly in order of LFS as well as in order of FLS. If you need to change sorting order then select one of notes list (right or left), open actions menu and select option "Sort" for LFS order and "Sort with words inversion" for FLS order.

28. Application settings.

You can change UI controls appearance in application settings section "Common appearance" (see pic. 7 below). It's possible to change main UI theme and application settings UI theme separately as well as notes in lists divider height (for lists of reminder and geofences UI separately), app bar color, page background color, note view and edit fields text color, notes in lists text color and separately for notes in special lists (lists of reminder and geofences UI).
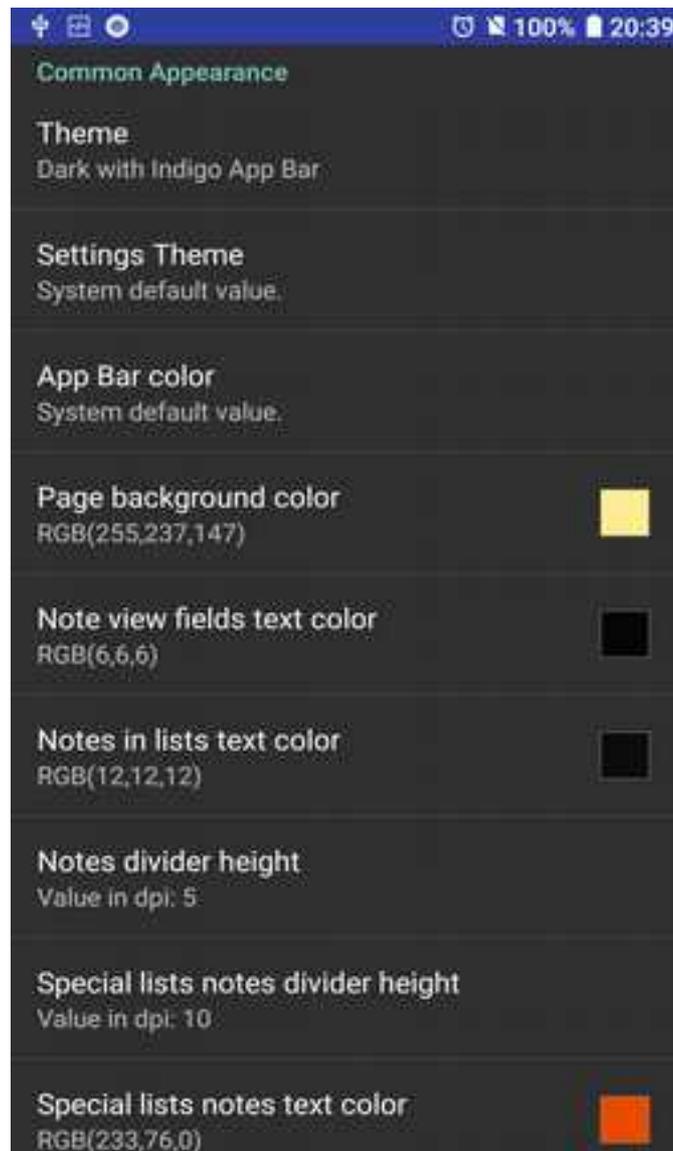
Pic. 7: Common appearance settings activated from main application menu option "Application settings". Some values are set here and some remains with "System default value" come from currently active theme.

 Background color of notes in lists is defined by a function assigned for a note and can be changed in functions settings form accessible in notes edit mode by a click on gear wheel button (see pic. 4 and pic. 8). Default text color for notes in lists is defined by a color of default function in document (function with the name "No function by default") like following. For bright colors of default function it would be defined as black and for dark colors it would be white. If text color would match the color of some other function assigned to a note, then it would be shown in notes lists inverted (black or white) to make text more visible. If you setup a text color of notes in lists in application settings and it matches color of function selected for a note then it (and notes selection checkboxes color) would be changed to black or white as well. The same color changing is done in functions lists to avoid invisible functions names. Text color in special lists (reminder and geo fences UI) is changed the same way in the case of matching with background color set by color gradient functionality in special lists.

   App bar color, page background color, note view and edit fields text color come from chosen theme by default and can be changed in application settings as well.

All the rest colors are defined by chosen theme. You can reset "Common appearance" setting back to initial values with theme "Light with Dark App Bar" by choosing "Reset common appearance settings" option of application settings. Changing text color of notes view and edit fields is not needed for colors matching can only occur in the case of setting them in application settings manually.
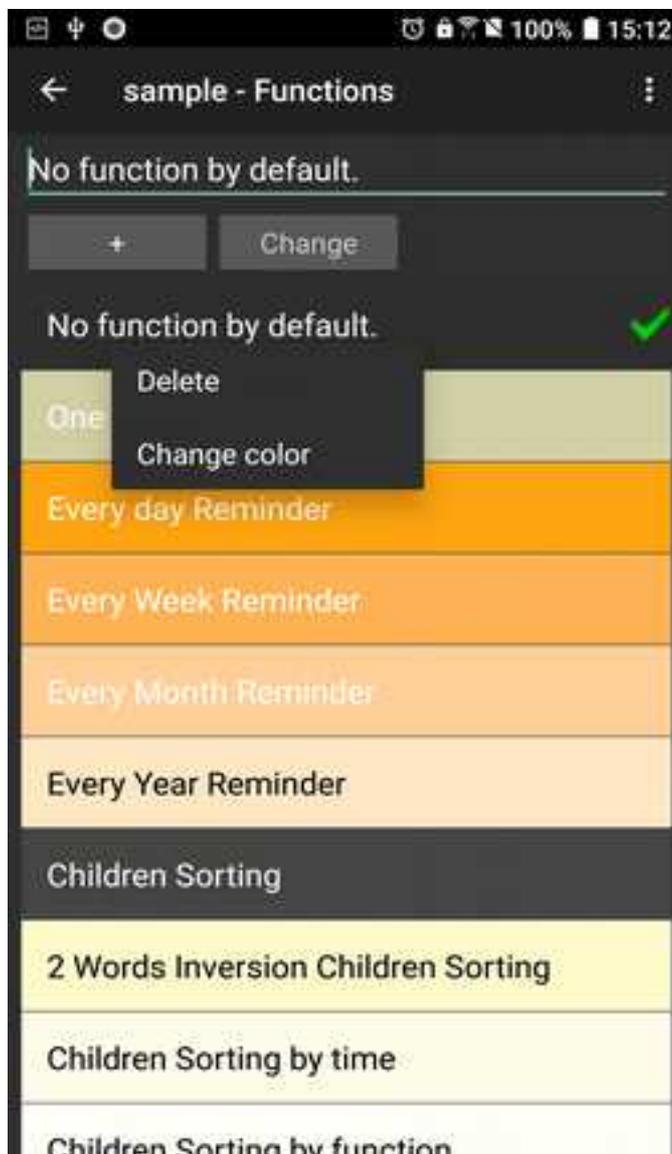
Pic. 8: List of functions in edit mode. Default color for text of notes in lists depends on default function (with name "No function by default") color, which can be changed by long click on function name and selecting option "Change color".

Highlighting of active note with "elevation" in view mode can be disabled in application settings (the same appearance in view mode as before app. versions 2.10, 2.7).

Notes deletion confirmation dialog for context menu "Delete" option in view and edit modes can be activated in application settings as well.

Starting from application version 1.8 (1.3 for Light version) multi-line formatting in text editing is supported by default. If you prefer working with text as before (removing multi-line text formatting when inserting new text) then deactivate option "Multi-line formatting".

Customization of schedule UI and reminder functions assigned to notes can be done in section "Schedule and reminder".

Useful information.

29. Contact a developer.

Please, send new features requests and changes, fixes needed to be done in new application versions as well as questions about the application on the address <u>milkywaymemo@gmail.com</u> . You can send email on that address with technical log attached (MWM_Log.txt) from a dialog opened by choosing "About" option from main application menu. There are OS version info, device type info, errors arisen during application work and other technical info in MWM_Log.txt file. Before being attached to email that file is copied to directory on sdcard – the same directory which is used for import/export documents of Milky Way Memo application. The path to that directory can be found in second option description of documents export dialog (Choose "SDCard Export" from the main menu).