

TECHNICAL DOCUMENT
(Technical and financial requirements)
Virtual Visit Tool of the Alpine Protected Areas (ViViAlp)



This tool was initially developed in the frame of the Interreg IIIB Programme Alpine Space.

The virtual visit tool is a software (Terrain View Globe) in 5 languages realised together by some protected areas of the ALPARC network and developed to be installed in the visitor centres.

How to join (integrate) this common communication tool with your own protected area?

1. When and how?

Up-date sessions of the tool can happen depending on demands and needs. For any demand, please contact info@alparc.org

The integration of a new protected area in the tool leads to the signature of an agreement (convention) between the protected area's representative, the manager of the tool (Task Force Protected Areas of the Permanent Secretariat of the Alpine Convention) and ALPARC.

This convention especially foresees a financial contribution of each partner of an amount of 1000 € per year for the management of the tool. (See paragraph concerning budget)

The partner who wishes to add his protected area into the tool has:

- **To deliver all the data necessary**, listed below, to Task Force Protected Areas, making sure that all necessary rights of use are available (specific forms will be delivered to integrate the data)
- **To buy himself the equipment needed** (listed below)
- **To buy a licence for the software** at ViewTec Inc. (www.viewtec.net) through the Task Force Protected Areas
- **To take in charge the costs for the integration of his own into the tool** (The Task Force Protected Areas coordinates and manages the needed subcontracting)

- To sign the convention mentioned above.

2. Which data?

2 kinds of data are necessary:

A/ The complete geographical cover of the concerned area

- **Digital Elevation Model (DEM):**

The DEM of the concerned area has to be provided with a resolution of at least 50 m (the best DEM are with a resolution of 0.5 m). If possible, the DEM should be resampled to 12.5 m before delivery.

The DEM has to be in ESRI grid format and in WGS84 projection.

- **Orthophotos:**

Georeferenced RGB-Orthophotos in TIFF-Format with 0.5 m resolution or lower covering the whole area.

The orthophoto has to be georeferenced in WGS84 projection.

If there should be a buffer zone around the area, which is highly recommended, orthophotos of the surrounding are needed as well. The buffer zone orthophotos will be resampled to 2.5 m.

- **IMPORTANT:** all the Geo-data have to be converted into **WGS84 projection**.

B/ Informations about the area

- **Information texts, called Points of Interest (POI):**

Each POI must give an information about the natural or cultural heritage of the protected area in form of a text of less than 500 types, including spaces, together with a title of less than 65 spaces as well as a short version of the title (for the touch screen), with less than 20 types.

The common guidelines provided have to be respected for writing the POI. The texts have to be delivered in 4 languages (French, German, Italian, Slovene, English). The Task Force Protected Areas can offer its assistance for the management for the translations (contacts with translators).

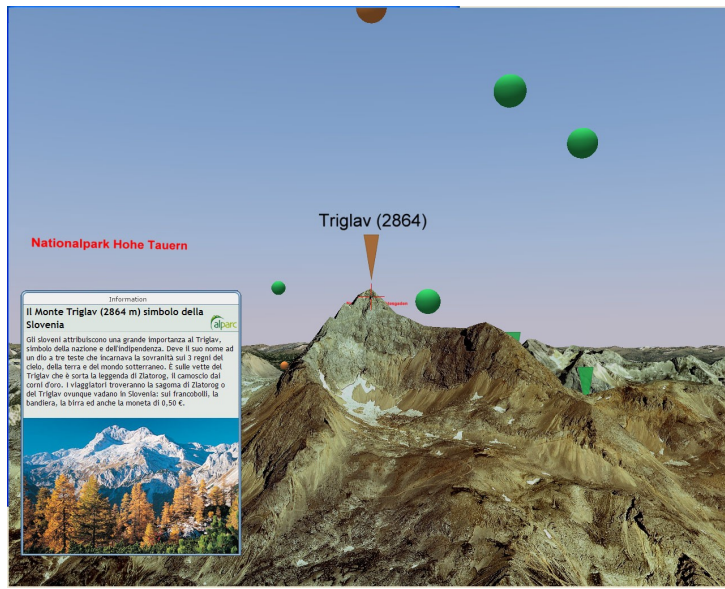
The POIs should be spatially and thematically well distributed. The optimal number of POI will depend on the surface of your protected area.

Each POI has to be delivered with geo-references to be integrated in the 3D landscape. A homogeneous dispersion of the POI on the area is necessary.

The POI have to be well distributed between following 6 thematic categories:

Information / Nature protection / Landscapes / Fauna & flora / Society / Cultural heritage.

- **Illustrations of the POI:** a picture (drawing or photo) in Jpeg format, a video in swf format (Flash, maxi. 50 Mb) or a 360° picture are possible.
- **List of « annotations » (names of places)** in original language to be integrated into the landscape (name of villages, cities, summits, rivers, passes, etc) with their geographical references. For the summits, add also the altitude in parentheses.



Conclusion DATA:

Digital Elevation Model (DEM)

Orthophotos

POI: information texts in 5 languages

Illustrations of the POI

Annotations (toponyms)

3. Which equipment?

Following equipment (hardware) is necessary for an installation in a visitor centre, museum or house of park:

- **1 powerful computer:**

Our recommendations:

CPU:

Intel Xeon W3530 (2,8Ghz or more, 8Mo cache)

Operation System:

Windows XP Professional SP2 or Windows 7 (not Vista)

Memory:

4096 MB – DDR3-1333 ECC

Hard Drivers:

500 GB SATA 7200T/min

Optical Drivers:

16x-DVD

Graphic:

Nvidia Quadro FX 580 – 512 Mo de RAM

Soundcard integrated

Please ensure, that the computer has Windows XP Professional SP2 or Windows 7 (not Vista) installed.

If the computer is better than this recommended version (better processor, better graphic card) it is of course no disadvantage.

- **1 beamer (vidéo-projecteur):**

Our recommendations:

19:9 would be nicer than 4:3, because the 3D-scene is more spectacular.

A professional projector is better than a projector for home use, because these video projectors are constructed for continuous operation.

DLP-technology has advantages. LED-projectors have normally a lower lifetime.

The projector should have a high ANSI lumen (luminance), especially if the room has diffuse background lighting.

The projector should not be too loud.

Nota bene: The operating cost could be high (bulbs) - for this reason, the you should anticipate these costs.

It is also possible to use a large LCD flat screen instead of a video projector, but we don't recommend it: the result is much less impressive and attractive (but it can be a solution for a small room).

The evaluated 16:9 video projectors were: Eiki LC W3, Mitsubishi WD200U and several 4:3 video projectors from HP, BenQ and Infocus. (evaluated LCD flat screen: NEC MultiSync LCD3000 (30"))

We recommend using the Mitsubishi WD200U.

- **1 touch screen:**

The user menu is developed for a 17" touch screen with a resolution of 1280 x 1024.

We recommend using the touch screens monitors 1739L, 1725L or 1727L produced by ELO (www.elotouch.com).

- **1 joystick:**

Model:

Typ: HG-332IR000-U-163PW6

No: 080-01-207-0022

Price: 1 joystick = CHF 1'598.00

2 joysticks = CHF 1'482.00/1

(10-99 joysticks = CHF 1'288.00/1)

(prices excl. 7.6% VAT):

The delivery time is about 7-8 weeks.

Contact:

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The delivery and receiving address for goods, repairs, pick-ups is following:

PEWATRON AG
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Hardhofstrasse 31
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- **1 silver screen and furniture:**

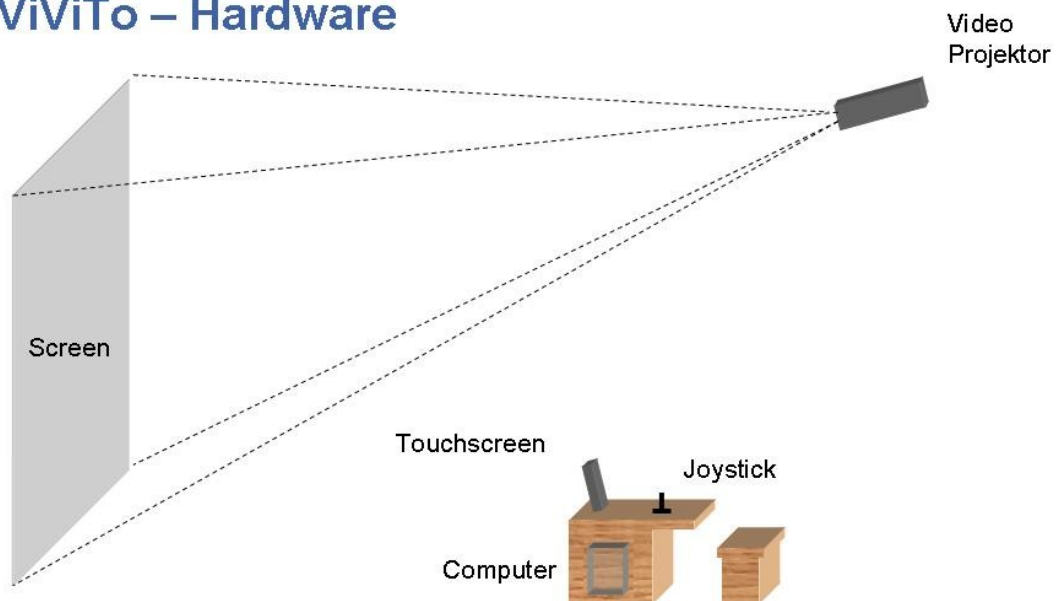
Our recommendations:

We suggest using a beamer (16:9) to project the virtual flight instead of flat screen monitors. The larger view gives a much more realistic and "atmospheric" impression of flying and the landscape.

Furthermore, the visitors should be able to sit when they use the ViViAlp otherwise the navigation with the joystick is too difficult. Thus, a sedentary bearing on a bench or seat compensates the different body heights of the users. The touch screen for the user menu could be build into the desk or stand on the desk.



ViViTo – Hardware



Conclusion EQUIPMENT:

Computer
Beamer
Touch Screen
Joystick
Silver screen
Furniture (desk, bank or seat)

4. Which budget?

You should consider following costs:

- **Data costs:** it depends on the data (especially aerial photographs) already available in your park or still to be purchased. Be careful in French case, you have to check if you have the “DRE” (Droits de Représentation Electronique) for your data (IGN).
- **Costs for writing and illustration of POI:** in general, this will be done in-house by your own staff and the illustrations can be chosen in your internal picture library.
- **Translation costs for the POI in 4 languages:** foresee about 0.03 Euro per type for a professional translation. For example, the translation of 1 POI with 580 types (text + titles) including spaces will cost around 17 €. Thus, the translation of 1 POI in 4 different languages will cost in total 68 €. For about thirty POI, plan between 2000 and 2300 € maximum.
- **Equipment costs (hardware):** a budget between 8000 and 13000 € has to be planned, depending on the quality of the chosen informatics infrastructure and on the furniture.
- **Price of one time-unlimited licence Terrain View Globe:** about 500 \$, namely between 300 and 400€.
- **Amount of the annual contribution** for the management, coordination and promotion of the tool by the Task Force Protected Areas: 1000 €/year
- **Costs for the data integration work (DEM, orthophotos, POI):** the Task Force Protected Areas will ask competent subcontractors for an estimate. The costs will depend on the time needed for the integration. The time needed depends on the amount of data (large area or small area) and on the quality of the data (if necessary to do a lot of correction work, like colour corrections, or not).

Appendixes:

- *Convention for the management of the ViViAlp*
- *Guidelines for the POI*
- *Further technical information*

CONTACT:

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The Task Force Protected Areas coordinates ALPARC, the Alpine Network of Protected Areas, a contribution to the Alpine Convention.