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Deliverable D6.2
First VESPA VA Review board

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Start date of project: 01 September 2015   Duration: 48 months

Responsible WP Leader: ObsParis, Stéphane Erard

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	Dissemination level	
PU	Public	x
PP	Restricted to other programme participants (including the Commission Service)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (excluding the Commission Services)	

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Contributing Work package (s)	WP6
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Board Reporting activity

Work package title   VESPA-VA
Date of the meeting and reference period (to which the evaluation should be assessed)   No board meeting or teleconference took place during the review period due to the tight schedule and the unavailability of the board members; iterations took place via email.   Reference period: PM1-PM12
Details of the members of the review board   • Santa Martinez (ESA), santa.martinez@sciops.esa.int: chair   • Tom Stein (WUSTL / IPDA / PDS), stein@wunder.wustl.edu   • Joseph Mafi (UCLA / PDS), jmafi@igpp.ucla.edu   • Andrea Nass (DLR /Berlin), Andrea.Nass@dlr.de   • Sandrine Guerlet (LMD / Paris), sandrine.guerlet@lmd.jussieu.fr
Has the Work package met the objectives in the relevant period as described in the Description of Action? If not please provide suggestions   The WP clearly meets the objectives for the reference period, and demonstrates a very impressive level of progress for this first year. The basic infrastructure and first services are already available, providing a very good basis for the implementation of additional services and the enhancement of the existing ones, and an excellent starting point to achieve the objectives of the upcoming reference periods (next 3 years) in an efficient and effective manner.   The upgrade of the data access protocol to EPN-TAP v2 and the enhancement of the VESPA search interface provide a significant improvement with regards to the previous service. A significant effort has been dedicated to documentation (see wiki); this is very useful to be able to track progress, iterate with contributors and users, and record decisions. The wiki will be a key source for the preparation of the final document package and the preservation of the information.

Information on how to become a VESPA data provider should be added to the VESPA website, including links to documents on how to get started. Documentation for data users on the services and data results is limited and should be improved.

Has the Work package met the expected impact in the relevant period as described in the Description of Action? If not please provide suggestions

There are currently 27 services online (15 added during the reference period, and 12 upgraded to EPN-TAP v2), 10 services planned and some additional services in draft. The engagement of so many new data providers in only one year of project (reference period) is a clear indication of the achieved impact and the maturity of the infrastructure. This also demonstrates the excellent work in terms of results exploitation and dissemination.

No metrics were available to measure the impact on the users in terms of data access, so this has not been assessed. This is expected to be available for the next reference periods.

The review board believes that adding big data providers to the data services, in particular PSA and PDS data holdings would be key to expand the impact on the science community.

Has the Work package disseminated and exploited results in the relevant period as described in the Description of Action? If not please provide suggestions

The number of dissemination activities (i.e. small events, presence at conferences, workshops, online tutorials) performed during the reference period exceeds the expectations. Dissemination material was shared (and adapted as needed) and is publicly available. This has contributed to raise the awareness of the VESPA project encouraging data providers to participate.

While the impact of the dissemination activities has been mostly measured by counting the number of events, the number of participants to the dissemination and exploitation activities and the addition of new data services to VESPA, for future reference periods, the participants' satisfaction with regards to the quality of the dissemination materials could be used as the main indicator of the quality of the dissemination activities. A questionnaire could be made available and informal discussions with participants could be collected to indicate the extent to which the presentations / material were adequate and interesting. A summary could be added to the report of the corresponding reference period report to be assessed by the review board.

Some additional suggestions / findings to improve the existing services are provided below.

1. **VESPA website** (http://www.europlanet-vespa.eu/)

- Helpdesk or Contact information: there is no contact information on the website, the users have currently no option to get help from VESPA. This is key to get proper feedback on the provided services throughout the project duration. There is a contact email in the VESPA search interface: support.epntap@obspm.fr but not visible from the VESPA website.

- Participants (http://www.europlanet-vespa.eu/participants2.shtml): the page indicates that there are 17 contributing participants while one 12 are listed.

- Standards:
  - Typo: replace "Acess" with "Access"

- Users may not know how to use Confluence or may feel intimidated by the amount of information in the wiki, so it might be better to have a PDF version of the documents and tutorials posted on the VESPA website rather than links to the wiki. At the moment, all links are links to wiki pages (working versions of the documents), which might be difficult to follow for people not directly involved in the evolution of EPN-TAP and tutorials. It might be useful to have a link to a PDF version of each document (latest version), and a note with the status including a link to the working version (in the wiki). For EPN-TAP v2, instead of two links to parameters & parameters description, just one link to the Confluence page EPNcore v2 could be enough (https://voparis-confluence.obspm.fr/display/VES/EPNcore+v2).

- Data Services: The page "Available on day" (http://www.europlanet-vespa.eu/EPN2020_day1.shtml) contains links to the website of each data service. This information is not available from EPN-TAP Services page in the wiki, and it is very useful (https://voparis-confluence.obspm.fr/display/VES/EPN-TAP+Services).

- Tools: It should be obvious when following a link will take the user out of the VESPA site (external link) e.g. with little arrow next to the link.

- Place the link to go back to the VESPA home page at the top (or make the banner at the top a link to the home page).

- Some pages on the website are opened in the same tab, while others are opened in a separate tab; make navigation as consistent as possible.

- Tutorials, use cases
  - This is a link to a wiki page, that is referring the user back to the website for current tutorials (http://typhon.obspm.fr/VESPA-tutorials/index.php?page=1). Just one page with all the information would be more convenient.
  - In http://typhon.obspm.fr/VESPA-tutorials/index.php?page=1, there are several links that do not work:
  - ExPRES tutorial: http://typhon.obspm.fr/maser/serpe/MASER_Guide_v0.2.pdf
  - Magnetospheric regions automatic identification with AMDA and TOPCAT: http://typhon.obspm.fr/VESPA-tutorials/docs/AMDA-TOPCAT_Magnetospheric_regions_automatic_identification.pdf
  - PlanetServer.eu: http://es1.planetserver.eu/classic/tutorial/tutorial.pdf
  - "Other tutorials related to the CDPP tools are available here." http://www.cdpp.eu/index.php/Tutorials/tutorials.html
  - There are 2 tutorials in the Help documentation of the search interface, not linked from this page:
    o EPN-TAP services and VESPA interface: Imaging spectrometry demo (Virtis/VEx EPN-TAP service)
    o EPN-TAP services and VESPA interface: Searching and plotting atmospheric profiles (Titan/CIRS service)

- Publications & presentations: Link is protected, not accessible to the public.

2. **VESPA user search interface**

The review board believes that a more extensive test campaign of the user search interface and service connection with tools is needed to provide better feedback. This could be one of the main tasks of the review board for the next reference period.

- The contextual help (?) for the different parameters should be expanded to include a brief description of the parameter (and, when possible, a list of allowed values or examples). This is very important in particular for some parameters that could have several interpretations or standard values. For example:
  - Measurement Type, Obs ID: The user may not know what values are allowed; some examples or list of options would be useful.
  - Location parameters

- Clicking on "Help" should open the help page on a separate tab. It should not replace the user´s search form.

- The "Help" page is too general. How do I find out what the various choices under Location > Spatial Frame Type mean? Many users may have a different understanding of these terms relative to how VESPA uses them. For this purpose, the "Help" page could include more information or a link to other relevant documentation (e.g. EPN-TAP), for details.

- Documentation describing the data sets is needed. There is almost no documentation describing the data sets. The users may not be familiar with the data results.

- The VESPA user interface should be upgraded to handle answers from multiple data services together; this has been already identified as an extra deliverable and is considered a key enhancement by the review board to improve usability.

- More query examples would be useful.

- The Download button should be disabled when no results (no objects met the query parameters). With the current implementation, when a dataset has zero objects that satisfy the query parameters, there still is a download button on the results page.

- In the actions available on services with results, it would be useful if the "Advanced Query Form" could be open with the same query already entered by the user, to be refined.

- Add option in the results table to reset selection; otherwise the user has to unselect one by one.

- Search case: CRISM data at Gale Crater: SELECT * FROM ... WHERE $c1max >= 136.507841$ AND $c1min <= 139.11883$ AND $c2max >= -6.667063$ AND $c2min <= -4.067516$ AND lower(instrument_name)= lower('CRISM').
  - Only 16 products returned, while the same query on the NASA PDS Geosciences Node returns 3374 images (same TRDR image type). The EPN Resources information panel says "EPN-TAP access to the Test CRISM database" with <u>Publisher</u>: Jacobs Uni. Does this mean this is only a partial copy of the CRISM dataset?
  - The TIFF URL link does not produce a readable file. There is no link to the original archive format or to the metadata for any product in the results table. In this use case, the user

wants to download the data for use with his/her own software, not using one of the tools pointed to by VESPA.
- Tried All Data > Download but gave up after a couple of minutes when there was no indication of anything happening other than web browser tab spinning around.
- Much of the default results table is blank. There is very little that describes or identifies the 16 images found. Parameters creation_date and measurement_type are blank; access_estsize seems inaccurate.

- Search case: VEX/MAG data at Venus; SELECT * FROM ... WHERE (lower(target_name)= lower('Venus') OR lower(target_name)= lower('2')) AND lower(instrument_name)= lower('MAG').
    - Results in service: VExMag_EPN20
        o Access URL does not work
        o Data Selection > Download returns "INTERNAL SERVER ERROR"
    - Results in service: AMDA
        o Processing level: -2147483648

3. VESPA service connection with tools

No further comments or suggestions for now. The review board believes that a more extensive test campaign is needed to provide better feedback. This could be one of the main tasks of the review board for the next reference period.

4. VESPA standards documentation
- One of the documents listed in deliverable D6.9 could not be found: see section 4.1, tap_sheet_tutorial.pdf.

- Not all deliverables are available via http://www.europlanet-2020-ri.eu/about-europlanet-2020-ri/public-deliverables; not sure if the reason is because some of them are not expected to be public. Some references to deliverables in the D6.6 report are pointing to this link, while the deliverables could not be found (e.g. D6.6, D6.9, D11.2 or "VESPA incremental report 1").

- The SSHADE prototype (D11.6) is password protected and could not be accessed: https://pre.sshade.eu/

- For the 3dView access to SPICE kernels (D11.4), the system is accessing the operational part of the NAIF repository (http://naif.jpl.nasa.gov/naif/data_operational.html) while access to the archived SPICE kernels might be better in some cases (http://naif.jpl.nasa.gov/naif/data_archived.html) e.g. operational area for MESSENGER only contains ORBIT (spk) while archive area contains all kernels.