

Orchestrating Without Partiture; Getting Information Systems Ready to the Future of Crisis Diplomacy

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“Diplomacy is very powerful environment.”
-Jay F. Nunamaker Jr., Spring 1994

Abstract

Crisis in and around Ukraine is becoming the first show-case in multilateral diplomacy, where Remotely Piloted Aircraft Systems (RPAS) and other technologies are deployed to produce information for the diplomatic processes of the Organization for Security and Cooperation in Europe (OSCE) and to public at the same time. This has taken place in a very rapid manner without time for descent planning and through learning by doing before and in the middle of the start and development of the crisis special monitoring mission based on the consensus of 57 member states.

This paper approaches these multi-lateral diplomacy scenes by looking at the work done through two disciplines which “orchestrate”; Social Science and Information Systems. Abbot et al. orchestration theory application into OSCE and to its “Ukraine toolbox” needs more research, in which e.g. IS literature’s socio-technical modeling methods will be helpful in order to bridge recognized gaps from practice and literature.

Information system researchers and developers are needed in more active roles as intermediaries to complement existing principal-agent e.g. OSCE-RPAS and other ICT vendor relationships. More theoretical and empirical research is needed to make the IGOs’ orchestration to meet what ICT can offer for future crisis diplomacy.

Keywords: *Inter-governmental Organizations (IGOs), orchestration theory, Remotely Piloted Aircraft System (RPAS), multilateral diplomacy, Organization for Security and Cooperation in Europe (OSCE), information system development, Ukraine Special Monitoring Mission (SMM)*

The foundations for the Organization on Security and Co-operation in Europe (OSCE) were laid down in the preparatory process for the Helsinki Final Act signed in Helsinki conference by heads of states 1975. [1]

The Organization for Security and Co-operation in Europe (OSCE) is the world’s largest security-oriented intergovernmental organization (later as IGO). Its mandate includes issues such as arms control and the promotion of human rights, freedom of the press and fair elections. It employs around 3,500 (, of which 1106 people in Ukraine Special Monitoring Mission (SMM) at the 31st August 2016) people, mostly in its field operations but also in its secretariat in Vienna, Austria, and its institutions. The OSCE is concerned with early warning, conflict prevention, crisis management, and post-conflict rehabilitation. Its 57 participating states are located in Europe, northern and central Asia and North America and cover much of the land area of the Northern Hemisphere. It was created during the Cold War era as an East–West forum. [2][3][4]

As the personnel numbers above show among the field operations the weight of Ukraine SMM is big. One interviewee for this study described OSCE

“...as politically born again, because no other organization – if any- is capable of tackling **crisis in and around Ukraine**”. [5],

as Ukrainian crisis is expressed in diplomatic OSCE language (bolded by author above).

The essence of Ukraine SMM is presented in the following table:

Table 1. Special Monitoring Mission to Ukraine [4]

1. Introduction: OSCE as an IS Orchestrator in Crisis Scenes Including “in and around Ukraine”

Who we are?

- Unarmed civilian monitors;
- Over 700 monitors across Ukraine;
- Over 580 based in the east ;
- From 45 participating States.

What we do?

- Report the facts as we observe and establish them;
- Gather information and report on the security situation;
- Report on the humanitarian situation and people's needs, and facilitate the delivery of humanitarian aid of other organizations;
- Help to establish dialogue and local ceasefires.

Important to understand:

- It is up to the sides to stop the fighting;
- We do not conduct investigations, but report on facts;
- We do not deliver, but facilitate the delivery of humanitarian aid of other organizations

So far, the OSCE's outputs in reporting about crisis in and around Ukraine, has been well received by their audiences at least by numbers according to following table 2 [3].

Table 2. Ukraine Special Monitoring Mission (SMM) Reporting By Numbers in 2015 [3]

- 306 DAILY REPORTS
- 51 WEEKLY REPORTS
- 30 SPOT REPORTS
- 8 THEMATIC REPORTS
- 4 BRIEFINGS to the UN Security Council
- THOUSANDS of media clips
- OVER 16,000 Twitter followers @OSCE_SMM
- OVER 5,600 Facebook likes

As the table 2 shows OSCE's SMM has widened its informing beyond WWW and mailing services to Twitter and Facebook.



Picture 1. OSCE SMM monitors assessing the impact of shelling in Mariupol, January 2015 [6]

All these required information for reports etc. has been acquired by patrols on the ground by the end of year 2015 (see picture above) with over 4 million km of

patrolling – 100 times the distance around the globe by over 18,000 patrols utilizing 284 armored vehicles plus civilian commercial – not military - remotely piloted aircraft systems (RPASs), which puts SMM's eyes on the sky, which are not always welcomed by fighting parties. In some cases have shot OSCE's SMM's remotely piloted aircrafts (RPAs) down or jammed their radio links. [3]

1.1. Two Disciplines, Which “Orchestrate”

When an IGO - like in Ukraine SMM - is deploying its relatively small resources to address large challenges by bringing together available public and private actors' activities, these activities have been described by the verb “to orchestrate” after a genuine theory laying **Social Science** studies conducted by Abbot et al. [10] in an international research project 2009-2015. It would be too simple to say in terms of information systems, that to orchestrate is to in-, out- or right-source, even if it has some features of all these sourcing modes. Orchestration theory in this context [explained deeper in chapter 2.]

Following are four examples of the uses of term “orchestrate” from another discipline, **Information Systems (IS)**:

Firstly, Jessup and Valacich.(1993) [11] described “orchestrated workflow” as one scenario for group support system development trajectories, which nowadays look very modest when taking into account the multiplicity of new technologies. Their scenario affected the work of Lyytinen et al. [7] [8] and Knuuttila et al. [9].

Secondly, service orchestration plays an important part in a service-oriented architecture (SOA). Web service orchestration can be contrasted with web service choreography, the execution of asynchronous tasks without a central coordinator. [12]

Thirdly, a cloud orchestrator is programming that manages the interconnections and interactions among cloud-based and on-premises business units. To orchestrate something is to arrange various components so they achieve a desired result. In an IT context, this involves combining tasks into workflows so the provisioning and management of various IT components and their associated resources can be automated. This endeavor is more complex in a cloud environment because it involves interconnecting processes running across heterogeneous systems in multiple locations. [13]

Fourthly, Ross and Beck [14] have presented an article on “How to Orchestrate IT Project Portfolios More Successfully” from the risk management angle.

All four orchestrating examples deal with governance like Abbot et al. [10], but mainly in a limited technical business context. How much these IS related “orchestrations” have to do with the present ICT environment of the OSCE will remain as subject for further studies, which require different sets of people to be interviewed from the OSCE.

Lyytinen et al. [7] have shown, that the Conference for Security and Co-operation in Europe (CSCE), direct predecessor of OSCE, community and multi-lateral diplomacy need advanced approaches from MIS researchers, too, who have been addressing mainly single business organizations in Computer Supported Co-operative Work (CSCW) literature.

Further Lyytinen et al. [8] have demonstrated why and how multi-lateral diplomacy is not business as usual nor unusual business, that needed special constructs of hard- and software in terms of CSCW.

Knuutila et al. [9] drafted a concept for diplomats’ work station for multi-lateral conferencing before mobile computing era.

These studies on applying at that time modern meeting support IS into multilateral diplomatic procedures released meeting support system’s forerunner Jay F. Nunamaker’s proverb about power-fullness of diplomacy cited in the beginning.

1.2. Applying Modern Mobile IT in the Form of RPASs into the Ukraine SMM

This chapter will show why and how the applying now modern mobile ISs in the form of RPASs into to the day’s multilateral diplomacy is still challenging and keeping “diplomacy very powerful environment” for IS vendors as developers and researchers, also.

Let us the interviewees [5] for this study to describe the deployment of RPASs (named UAVs in OSCE language):

*“There was hard political pressure to get the propellers in to air and nobody thought, what the f**k to do with the data... western states’ representatives saw UAVs as magic bullets...”*

The company , who won the first bidding for UAVs, told , that the first possible deployment would be in 4 months, but the Swiss [who were the OSCE’s chairmanship country at the time] stressed , that UAVs must be deployed within the mission([SMM]) in one month...

Nobody really had time to think, what we are doing... containers were put on the road to Kiev for test flights and operation was built in a month!

The UAVs were deployed on a commercial basis, because military UAVs of western countries flown by their uniformed officers were out of question for Russians.”

A summary of these lines tell, that this process did not go by the book or discipline with or without orchestrating written before. Neukirch [15] has published a more polished chronology of this process, which will be cited later.

At the end of the day and the month everything is political in the OSCE. Politicking and understanding its consequences was and will be part of the job for diplomats, IS designers, vendors, researchers etc. in the OSCE context.

1.3. Research Question

The main research question for this paper is:

What lessons can be learned for further IGOs’ orchestration from the OSCE’s work in deploying information systems, e.g. RPASs, into crisis in and around Ukraine for future multi-lateral crisis diplomacy?

The lessons will be formed from recognizing and bridging as far as possible the gaps between different actors in multi-lateral diplomacy process seen from the research angle. These gaps will be recognized from diplomatic political mood-oriented-practice and from mode-oriented Social Science and Information Systems literature as described in the next chapters.

The developments around the use of social media (see above Table 2) must have been left out from this article due to space limitations as well as the latest technical developments in commercially available security related ICT, which might facilitate the work of Ukraine SMM.

The target is to survey the way for further research by raising new topics to the agenda by recognizing existing gaps derived from practice and literature.

2. The OSCE as an Orchestrator; Recognizing the Gap from Literature

In building hypotheses for orchestration studies two contrasting models are used. The O-I-T-model specifies the relationships between an orchestrator (O), which enlists and supports the activities of an intermediary (I), which in turn governs the behavior of one or more targets (T). O-I-T-model is contrasted with the P-A-model, which specifies the relationship between a principal (P), which delegates tasks, and an agent (A),

which carries them out. Knitting these models together starts with the observation, that states are principals to IGOs as agents, but IGOs are orchestrators of intermediaries who (sometimes) have states as targets. [10]

Orchestration highlights nuanced relationships among governance actors, whereas many literatures on global governance focus on particular actors seen as acting largely in isolation. More concretely, orchestration highlights the inner workings of regime complexes and other governance structures: in contrast to dominant literature, it emphasizes how participants with agency create, maintain and manage governance complexes.

Orchestration theory helps us analyze how IGOs interact with their institutional ecosystems, with each participant shaping the others' authority [10] e.g. OSCE helps state the authority of non-state actors in and around Ukraine.

The five general orchestration techniques are widely used and often in combination, according to several case study investigations in the volume of International Organizations as Orchestrators: convening, agenda setting, assistance, endorsement and coordination.

Convening is used to create purpose-built intermediaries. Assistance plays a special role in supporting rule implementation. Endorsement is particularly important for rule-making intermediaries. Agenda setting and coordination, while used in many contexts, are especially important for orchestrating regime complexes. [10]

Dai [16] in his article titled as this chapter in Abbot et al [10] argues, that IGOs rationally adapt to their strategic environment by working around binding constraints and tapping into alternative resources made available by non-state actors. Under certain circumstances, it may be both efficient and effective for IGOs to enlist non-state intermediaries to help monitor and enforce states' compliance. In this sense, Dai argues, that orchestration is an optimal strategy of adaptation.[16]

Dai provides empirical support through comparative study of IGOs for Abbots et al.'s orchestration theory hypotheses, especially goal divergence and intermediary availability. However, Dai finds the chances for greater orchestration in these areas smaller for Security IGOs than for Human Rights IGOs. (See [16 , 150-155] The OSCE by its nature is Security IGO and on the other hand Human Rights IGO as well as Environmental IGO and Trade IGO at the same time, too, which all four are categories in Dai's analysis, which does not cover the OSCE at all as main research

object. This is the case in whole project described in the volume of Abbot et al. [10].

There is no literature, which studies OSCE as an *avant garde* IGO related to the orchestration theory. For example, the OSCE as an IGO is many-faced difficult research object: it can act in some cases according to military rules (e.g. monitoring military exercises) and in some cases according to civil rules (e.g. monitoring elections). Given the 14 instruments of "Ukraine toolbox" [see paragraph xx] with their mandate principles and procedures, they are not easily categorized to fit into present orchestration theory's taxonomies derived from more single-area governing IGOs.

As stated above SMM revitalized the OSCE as a major player in the international scenes of diplomacy and its rapid and innovative use of RPASs revealed again the gaps and steep learning curves between practitioner diplomats and vendors not to mention researchers. (Compare to Knuuttila et al. [9])

These gaps must be bridged with research in order to help the OSCE and other IGO's to better fulfill their crisis governing mandates for peacebuilding in the future.

2.1.RPAS as an Information System

The special role given to deployment of RPASs as an **information system** is based on following features:

- In RPAS "at the maximum 30 % of the system is flying and 70 % is on the ground including the pilot, why expression "unmanned" is not adequate [interviews]. This is not usually understood by vendors of these systems, who use the same approach as to car buyers: "Flexibility was also the key to success when the SMM was in urgent need of unarmed unmanned aerial vehicles (UAVs) and an additional 70 armored vehicles in the summer."[3]

-RPAS deployment is literally crossing borders not only geographically but also between intelligence, diplomatic and public spheres: What used to be sole property of more or less military intelligence services has now become open to diplomats as well as to public. Diplomats employed by the OSCE secretariat moderate the information flow to their colleagues and to the public.

- RPASs, as everything else including financing, were brought into to OSCE's Ukraine SMM in very rapid and flexible manner, which is exposing the strengths and weaknesses to research. Everybody understands the constraints caused by rapid set-up of SMM and makes

exchange of views easy including talking to researchers regardless your political standpoint or nationality.

3. The Rapid Set-Up of Ukraine SMM Using RPASs; Recognizing Gaps from Practice

RPASs usage is spreading to other IGO's to be used for remote sensing in areas and duties, where manned aircrafts are unfeasible [5][18]. Ukraine SMM is now in *avantgarde* of civilian RPASs use and lessons learned from there are in focus by all major players of diplomatic scene including by-lined military services.

3.1. Research Method and Knowledge Acquisition

This survey-type paper is based on, and its conclusions are drawn from, the interaction between six sources:

1. Participation in and facilitation of a two-day Thematic Meeting of the OSCE Border Security and Management National Focal Points Network on Emerging Technologies in Border Security and Management – Use of Unmanned Aerial Vehicles (UAVs) and related expert discussions in October 2015.
2. Discussions in “Breaking the Ice of Frozen Conflicts? Understanding Territorial Conflicts in East and Southeast Europe” in July 2016, seminar organized by the University of Regensburg
3. 21 semi-structured expert interviews of various players involved in and associated with political diplomatic processes in the OSCE and its Parliamentary Assembly meeting in Helsinki June 2015 and the deployment of RPAS by the OSCE in monitoring the Ukraine crisis [5].
4. Follow-up of public OSCE reporting on its activities related to Ukraine and missions in general.[3]
5. Literature review of related recent articles in political science and information systems.
6. Learnings from the participation into 5 year EU-funded AIRBEAM project, in which among other outcomes 599 law enforcement authorities' use scenarios for unmanned aerial vehicles were drafted [17]

To facilitate the answering of the research question gaps from literature in and from practice have been recognized and bridged as far as possible in the premises of this article.

3.2. Set-up of Ukraine SMM

The OSCE Special Monitoring Mission to Ukraine is being deployed following a request to the OSCE by the government of Ukraine and a consensus agreement by all 57 OSCE participating States. The monitors are to contribute to reducing tensions and fostering peace, stability and security [17]. A lot of attention was paid to keep SMM's “civilian character and civilian face. Nonetheless, an “add-on” military mission might be considered in support of the SMM, but it would need a separate mandate.” [15]]

Germany, France, Italy and Russian Federation offered military UAV support to SMM during mandate negotiations. After this offer informal discussions started about usage of military UAVs to support SMM for gathering information. “Only the UAVs would fly over the conflict zone and the military personnel – armed and in uniform – would stay outside it. [15] While these political level consultations over military UAV “add-on” usage went on the OSCE had already deployed commercially operated civilian UAVs, which carried out their maiden flight on 23 October 2014 near Mariupol. “This was exactly four months after the idea of using UAVs was first voiced in an internal concept paper, and just over three months after the decision was made. Given the lead times that such projects usually have, this, alongside the rapid deployment of the SMM in March 2014 is another example how fast the OSCE is able to react.

“By deploying unmanned aircraft systems the OSCE wanted to show that they were up to date ... This deployment was not intended for the situation that later developed in Ukraine” [5]

In March 2014, all 57 participating States of the OSCE unanimously agreed to establish the OSCE Special Monitoring Mission (SMM) to Ukraine. The SMM to Ukraine is an unarmed, civilian mission and its main tasks are to observe and report in an impartial and objective way on the situation. The SMM also establishes and reports facts in response to specific incidents [18].

A separate confidential memorandum of understanding was drawn up concerning the operating of RPAS in Ukrainian air space.

“A lot of attention was paid to the establishment of the (RPAS) service itself into Ukraine ... and not to make a process that would link the data from the RPA to the political reporting to the OSCE headquarters in Vienna.” [5]

On the 17th of October 2014 Didier Burkhalter, Swiss Foreign Minister and OSCE Chairperson-in Office

thanked Italy, France, Germany, Ukraine and Russia for their offers to place RPAs and associated personnel at the disposal of the OSCE in order to enhance its monitoring capacities in Ukraine [20].

On the 23th of October 2014 the OSCE SMM successfully completed the maiden flight of its unarmed RPAs. The RPASs (Schiebel CAMCOPTER® S-100) were being provided, flown and maintained by the Austrian company Schiebel. They are under contract to the OSCE and under the authority and direction of the SMM. Data collected is the property of the OSCE and for the sole use of that organization.



Picture 2. CAMCOPTER® S-100, prior to deployment by the OSCE Special Monitoring Mission to Ukraine [21] A new service provider is taking over the RPASs service for SMM by using three different RPAs for different operation distances.[5]

3.3.Gaps from Practice

An analysis of practice related literature and interviews for this study *in italic* about the deployment of RPA/UAVs reveal at least following **gaps from the practice**:

- a) gap between political requirements and technical realities
- b) gap in political trust between major member states
- c) gap in the procurement/vending process
- d) gap in trained personnel
- e) gap in desired time for design, testing and deployment
- f) gap - or rather lack – of desired information system(s) as outcome(s)
- g) gap in beliefs vs. realities, what RPASs can contribute
- h) gap between military and civil efforts to deploy RPASs

4. Modeling the Multi-modal OSCE to meet Orchestrating theories

An agency's mandate shapes its approach to peacebuilding, and hence the conception of this term employed by agency staff. The objectives sought and

the strategies employed are profoundly influenced by whether an entity is located within the UN Secretariat, a UN specialized agency, a European organization (the European Union, EU; the Organization for Security and Co-operation in Europe, OSCE), or merely within the government of an individual member state. [26]

4.1.Orchestrating Monitoring: the Adaptation of Ukraine Toolbox

Like the crisis in and around Ukraine developed step by step, which were far from equal in size and timing, the corresponding Ukraine toolbox evolved gradually in different decision making forum of the OSCE structures, which involve levels from parliamentary and inter-governmental to OSCE intra-agency actions.

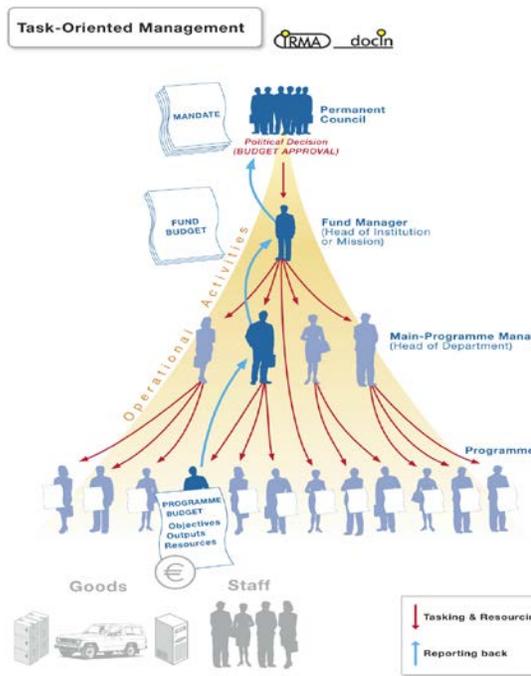
“The OSCE has been and is using 14 different kinds of structures and organizations in governance of crisis in and around Ukraine. They all have their mandate, birth history and rulings based on consensus decisions made in some phase of the OSCE process. In everyday use they are called “OSCE’s Ukraine toolbox” [5]

Due to space limitations in this paper cannot present the table) to start modeling of “Ukraine toolbox” [22], which will be helpful for future work by explaining the nature of each tool and their inter-play would take several papers’ space. Most likely, further study of simultaneous functioning of these different tools in accordance to orchestration theory will lead to develop the classifications and conceptual taxonomies of Dai [16] and Abbot et al. [10].

4.2. Addressing the OSCE’s Procurement Processes

The successful adaptation of RPASs should always include structured design, purchase, and implementation projects. These should take into account the operating of the flying platform, attached sensors, communications, and information sharing with other information systems, such as command and control or situational awareness systems[19]

The following structure was able to function without “cumbersome procedures” [15] in case of the OSCE’s Ukraine SMM. See the following picture’s corner down left, where category “Goods” takes care of ICT and RPAS procurement like buying cars for the mission.



Picture 3. Task-Oriented Management according to OSCE's GO Programme [23]_

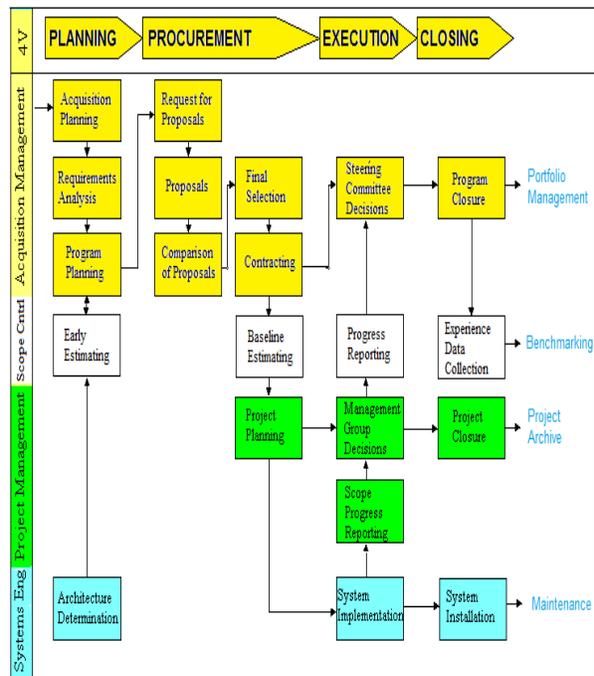
Experience was gained (for the OSCE) in the use of RPAS in United Nation missions in Africa. It is unclear how this experience was taken into account when deploying RPAS in a rushed manner in the OSCE mission in Ukraine." [5].

When the use of RPASs was established, all attention was focused on getting approval for flights from Ukraine. At that time a crisis was not yet at hand and RPA flights were considered to be a measure of building confidence [5].

"The costs of RPAS usage started to swallow an ever greater part of the 88 million Euro mission budget, because flights became more and more frequent", and "better, more expensive surveillance cameras were added". "One RPA with this equipment including anti-jamming capacities may cost over one million euros and insurance costs with tightening conditions are skyrocketing for use in Ukraine SMM." [5].

The OSCE is in need of a comprehensive informing system to serve all stakeholders of "Ukraine toolbox".

Therefore a proven system for information system creation and procurement like in following Picture 4 is needed. How many of this boxes in the Picture can be really worked through, when next politically motivated rapid ICT deployment will take place?



Picture 4. Software intensive IS acquisition process [24]

4.3. Gaps from literature

Adding the first **gap from literature** to be added to the above-mentioned list of gaps from practice in previous chapter:

- i) gap in Abbot et al.'s orchestrating theory, which does not cover the OSCE in general and has not yet been applied to it and its "Ukraine toolkit" (described in chapter 2)
- j) gap in the deployment/procurement of information system(s) in crisis in a rapid manner (see chapter 4.2 above).
- k) gap in the modeling of multi-lateral diplomacy real workflows, not by-the-book in nowadays computing age, in which new diplomat and staff generations use their devices and internet presence disregarding generation gaps as they please
- l) gap in the "reverse engineering", like going back to pencil and paper and meetings without IT tools, due to mistrust in information security measures in diplomacy governance after the cases of a state eavesdropping another state by using ICT[5], not to mention Snowden, Manning, Assange, Wikileaks etc.

The OSCE has been and is using 14 different kinds of structures and organizations in governance of crisis in and around Ukraine. They all have their mandate, birth history and rulings based on consensus decisions made in some phase of the OSCE process. In everyday use they are called "OSCE's Ukraine toolbox" [5] Due to

space limitations in this paper we concentrate into to the table row number 4 OSCE Special Monitoring Mission. Modeling, which might be very helpful for future work, and explaining the nature of each tool and their inter-play would take several papers' space.

5. Conclusions: Topics for New Research

In the introduction two disciplines, which “orchestrate”, were presented. These disciplines, Social and Information Systems Sciences, have different approaches to crisis governance. In the special crisis informatics number of CSCW Journal it was concluded:

Research in civil security and crisis management usually aims to improve the ‘resilience’ of a system (e.g., a company, a city, a community, a nation), its ability to resist disturbances of its consistent state as well as its ability to return to this consistent state once being disturbed. It has been a remarkable development that even at important publication venues in crisis management, the analysis of and the design for collaborative settings has become the predominant research discourse (see e.g. the proceedings of the ISCRAM 2014 conference, recent issues of journals like the International Journal on Information Systems in Crisis Response and Management (IJISCRAM) or the Journal on Homeland Security and Emergency Management (JHSEM)). The path to improving resilience in practice may, however, remain difficult, as relying on collaboration always means to risk one’s own autonomy.[18]

The last sentence comes in a way to regret the loss of power in case of collaboration, which is one form Abbot et al.[10] orchestration taxonomy, of which’s one basic starting point is the division and use of power by different actors in order to reach for target.

Information Systems angle may be seen narrower from micro-organizational approach raising bottom-up from the experiences by and consequences for a single organization, which need to be analyzed, too.

There are obviously two levels of orchestrations, which have been illustrated in the following Picture 5. In the upper part are Social Science based macro-level orchestrations, which use their political mandate in a top-down manner by inter-governmental organizations like OSCE in and around Ukraine. In the lower part there are Information Systems based needs for micro-level orchestrations for inter-governmental organizations and, for instance, for their RPAS service providers.

The macro-level approach misses the details, technical insights and methods of IS like socio-technical methodology in designing information systems. On the other-hand micro-level approach cannot overcome or go around the constraints laid by power and other

structures by using intermediaries in a creative manner, which is the core of Abbot et al.[10] orchestration theory. IS people take the number of actors and their roles more “given” and keep the actors in their traditional collaborative roles and **modes**, while OSCE diplomats and staff are in more innovative **mood** to fight for peace.

How to make these Social Science orchestration theories to shake hands with IS orchestration technologies? Picture 5 gives only a limited, partial answer to the research question.

These hand-shakings are needed to start working for bridging the gaps pointed out in this paper. These hand-shakings should take place by arranging future R&D meetings and workshops including not only practitioner OSCE diplomats and staff and vendors, but also interested researchers from their Social, IS and other Science’s silos away from their comfort zones to review Ukrainian demarcation zones and ICT used there. These zones are more powerful environments than before (e.g. in 1994) in terms of finding new research gaps as this article shows.



Picture 5. Elements for further socio-technical development of orchestration theory for crisis governance in the OSCE framework. Arrows symbolize research gaps.

Of course, this micro-macro-level contrasting has its limitations, but it may offer new venues to further theory building.

More research is needed to seek common denominators to these different orchestrating communities in order to find answers to the research question, whether IS R&D community can meet the challenges of macro-level orchestration done in the IGOs like OSCE?

At the moment it seems, that modeling and theory building work done in the Social Science side is leading. Picture 5 gives only a limited, partial answer to the research question, what kind of lessons should be developed by using knowledge and skills of Social and IS scientists, too.

OSCE's role as orchestrator needs more research as suggested above, but one must remember that the conductors – in order to continue the use of musical metaphors – of the crisis scene are sides of the crises.

As OSCE SMM Chief Monitor Apakan in his statement at the UN Security Council (11 December 2015) said:

“All activities by the SMM are guided by the aim to achieve normalization and stabilization of the situation in Ukraine. As our numbers expand, these efforts will be further strengthened. But the political will for a full ceasefire and a political solution and peace must come from the sides [of crisis].”

Only political solution and peace will enable further orchestrating for the build-up of civil society in and around Ukraine. This will be “more of a Jazz Ensemble than a Classical Concert” with partiture as German Foreign Minister Frank-Walter Steinmeier put it [25].

How ready, able and welcome are the IS and Social Science researchers to join the “jam sessions” in the OSCE HQ salons, which hosted the Vienna Dancing Conference on European security 200 years ago?

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