

Indonesian State Defense as an Effort to Counter the Cyber space Security Threat of Metaverse

Ameilia Nur Aini¹, Mochammad Ferdion Firdaus³, Dwi Ari
Purwanto³, Imannuridin Abdillah⁴

¹(Defense Management Department, The Republic of Indonesia Defense University, Indonesia)

²(Defense Management Department, The Republic of Indonesia Defense University, Indonesia)

³(Defense Management Department, The Republic of Indonesia Defense University, Indonesia)

⁴(Administrative Science Department, Jember University, Indonesia)

ABSTRACT: The existence of a virtual world in the form of a metaverse will trigger an expansion of the security spectrum given that everyone in the metaverse is free to do anything without having to deal with positive laws and norms. This paper will examine how to deal with these threats by building an attitude of defending the country for Indonesian citizens and how the government has made efforts. The purpose of this paper is to reveal the role of state defense in dealing with cyberspace security threats. This type of research is library research, which is a series of studies related to library data collection methods, or research whose research objects are explored through various library information books, theses, scientific journals, articles, and government regulations. The analysis in this study uses an approach to the concept of cyber defense and the concept of defending the state in Indonesia. One of the threats to national defense and security arising from the metaverse is the spread of ideology or provocation of harmful thoughts. Facing these threats, according to the cyber defense guidelines, humans are the main asset in the success of cyber security. The biggest challenge in implementing cyber defense is to provide competent human resources who are ready to follow the dynamics of the cyber environment that continues to develop and nationalism. From this point of view, the attitude of defending the country becomes very important. The Indonesian government, through various programs and movements, has sought to build awareness of defending the country. The existence of a virtual world in the form of a metaverse will trigger the expansion of the security spectrum. This uncontrolled behavior poses a threat that is not limited to individual security (such as cyberbullying) and will even have an impact on public security and even state security (radicalism and terrorism propaganda). The Indonesian government, through various programs and movements, has pursued this campaign. This action is a preventive initiative of the government so that when metaverse becomes a lifestyle of the people in the future, the Indonesian people are ready to face various potential threats with an attitude of defending the country.

KEYWORDS—Cyberspace Security, Metaverse, National Defense

I. INTRODUCTION

Human civilization will be increasingly attached to the development of the digital world. These developments even created a virtual world called cyberspace. Cyberspace, also called metaverse, is the result of the integration of electronic media and communication network technology equipment; which are connected to communication equipment spread all over the world and are used to communicate with each other online

(Arifin, 2020, [1]). In this virtual world, all human activities carried out in the real world can also be carried out in the metaverse (Hermansah, 2022, [2]). Metaverse users can make a career, and buy land assets, buildings, and cars with valid certificates according to the rules in the metaverse.

The existence of a virtual world in the form of a metaverse will trigger an expansion of the security spectrum. This is because the higher the intensity of humans in cyberspace, the greater the potential for spreading deviant thinking and provocation of crime. This threat is not limited to individual security but will also have an impact on public security and even state security. A real example can be seen in the data from the Ministry of Communication and Information of the Republic of Indonesia, that during 2018, 10,499 content has been blocked containing radicalism and terrorism. It consists of 7,160 content on Facebook and Instagram, 1,316 content on Twitter, 677 content on Youtube, 502 content on Telegram, 502 content on filesharing, and 292 content on websites (Wantiknas, 2020, [3]).

On the other hand, it should be noted that the Indonesian people are very vulnerable to external cultural influences. This is due to the fragile nationalism of the Indonesian people. Many experts think that Indonesian nationalism is currently undergoing degradation marked by increasing conflicts between ethnic groups, religions, and other phenomena of national disintegration. This problem will actually be even more dangerous in the digital era because of the ease with which media provocations and minimal information filters. This phenomenon will be an event that can be explained by chaos theory through the famous phrase, "Does the flap of a butterfly's wings in Brazil set off a tornado in Texas" (Lorenz, 1993 [4]). Or some say "The flapping of a butterfly's wings in Sydney harbor is enough to cause a hurricane two weeks later in Jamaica.

On the other hand, what is no less urgent are the problems plaguing Indonesia's young productive people. Indeed, many young people are able to make achievements such as in various Olympic championships and tournaments in various countries. But keep in mind that there is still something concerning the activities of the younger generation that has been written and researched by several leading newspapers in the capital, that not a few of our youth are trapped in "The Pursuit of Wow" pursuing the glitter, promoting pleasures, ignoring idealism. In the sense of being more materialist and individualistic as well as indifferent attitudes toward the progress of the nation-state.

Viewed from the context of defense and security, all of these issues will become a ticking time bomb with the presence of a metaverse that will create global hegemony. The threat in cyberspace is classified as a real threat, so it requires an effective defense strategy and high deterrence. Based on Law Number 3 of 2002 concerning National Defense, it is emphasized that in order to face this threat, Indonesia's national defense is based on a universal people's defense system involving the entire community by utilizing all national resources. This context explains the need for a state defense attitude (known as 'Bela Negara') from all Indonesian people to realize national resilience in the face of digital threats so that they are not easily provoked and radicalized.

Based on the description and context above, this paper will examine more deeply how efforts to build an attitude of defending the state for Indonesian citizens and how that attitude of defending the state can counteract the real threat of cyberspace security metaverse. The purpose of this paper is to analyze efforts to develop an attitude of defending the state in Indonesia and to understand defending the state in the context of facing the cyberspace security threat of the metaverse. This paper is expected to be an academic idea that builds collective awareness of the importance of defending the country in the current and future digital era.

II. THEORETICAL BASE

2.1 Indonesian Defense and Security Concept

Law Number 3 of 2002 concerning National Defence, defense development as a power and effort to realize a unified national defense with the aim of protecting the entire nation and the entire homeland of Indonesia, advancing public welfare, and educating the nation's life, participating in implementing world order based on independence, lasting peace, and social justice, are important things that must be built sustainably. The purpose of national defense is to protect the safety, sovereignty and integrity of the Unitary State of the Republic of Indonesia from threats and disturbances that will arise in the future. Threats are the basic foundation in the formation of the national defense system, both actual and potential threats (Manggala, 2016, [5]).

2.2 MetaverseCyberspaceSecurityConcept

The metaverse is the real world created by the convergence of virtuality and reality. This virtual world interacts with the real world on a whole new level. The metaverse is the next evolutionary step after the advent of the internet and social media. Metaverse is changing not only how we connect to the internet, but also what we connect to the internet. Metaverse is a virtual space that replicates human activities and activities in the real world to be carried out in the virtual world. This space allows users to be in a virtual world that has new opportunities to interact with virtual objects (Martono, 2011, [6]). Later, what is in the real world can happen there. Including new trends that might only exist in the Metaverse.

R.M.J Indrawan and Efriza (2017, [7]) have the view that the threats of the 21st century are intangible, such as ideological threats in the form of terrorism and radicalism which have implications for state defense and national security, especially in Indonesia. In this situation, intangible threats coincide with cyber threats because both cannot be touched physically, but their effects can be felt. Meanwhile, in the Cyber Defense Guidelines released by the Ministry of Defense of the Republic of Indonesia in 2014, it is explained that the space in which the utilization of Technology, Information and Communication (including the world of metaverse) and the internet takes place is called cyberspace. Cyberspace on the one hand brings so many benefits, but on the other hand it can also create various threats and potentials as well as disturbances ranging from small to large scale. This causes the importance of efforts to maintain the confidentiality, integrity and availability of electronic information and infrastructure in the cyberspace so that it is carried out properly, which is known as cyberdefense.

The implementation of cyber defense is a necessity and is a priority obligation for the state and all agencies in it, where the level of importance is directly proportional to the level of dependence on the use of the cyber space. This causes defense institutions to be obliged to take important steps related to cyber defense, both within their own environment and in the context of supporting cross-sectoral cyber defense. Cyber defense needs to be implemented in a planned and integrated manner so that its implementation can run properly and optimally.

2.3 Indonesian Nationalism Concept

As a social concept, nationalism does not just appear without a process of meaning evolution through language media (Supardan, 2011, [8]). Guido Zernatto explained that the word 'nation' comes from the Latin word 'natio' which is rooted in the nascor word 'I was born'. In the Middle Ages, the word nation was used as the name of a group of foreign students in universities (such as the Indonesian Student Association for Indonesian students abroad). Furthermore, the word nation got a new, more positive meaning and became commonly used after the 18th century in France. At that time the French Revolutionary Parliament referred to themselves as the *assemblee nationale* which marked the transformation of these political institutions, from the exclusive nature that is only reserved for the nobility to the egalitarian nature in which all classes achieve the same rights as the elite class in politics. From here the meaning of the word nation became as it is now which refers to a nation or group of people who are the official residents of a country.

Nationalism is a social invention of the most amazing in the course of human history, at least in the last hundred years. There is not a single social space on earth that is free from the influence of this ideology. Without nationalism, the course of human history would be completely different. The end of the Cold War and the spread of ideas and culture of globalism (internationalism) in the 1990s until now, especially with the existence of communication and information technology that developed very acceleratingly, did not immediately bring a death song for nationalism. On the other hand, narratives of nationalism have become increasingly intensive in various international social, political and economic interactions and transactions, both among developed countries, such as the United States (especially after the WTC tragedy), Germany, and France.

The magnitude of the implications of nationalism in various social dimensions invites scholars to try to understand and at the same time critically examine the concept of nation and nationalism (nationalism), no matter how great the paradox and ambivalence it contains. Of course, trying to solve the puzzle of nationalism is not easy considering the various factors that make up the building of nationalism. If it is likened, nationalism is a building, so every effort to find the essence of nationalism is on a different floor. Consequently, the theorizing

of nationalism is often particular, not universal as Weber would have liked. However, this is not a problem, especially in the postmodern paradigm when knowledge is no longer monolithic and homogeneous. The diversity of views will actually enrich human understanding of the phenomena around them.

Nationalism in Indonesia is closely related to the concept of population or Indonesian citizenship so far it is still strongly influenced by Law no. 62 of 1958, which is constructed as a distinguishing feature between the citizens themselves (natives) and descendants. So in order to answer the problem at the beginning, it is interesting to ask what kind of conception of citizenship will need to be fought for? To answer this question, it is necessary to clarify the concepts of nationality and citizenship first. As stated by Prof. Dadang Supardan (2011, [8]), that the concept of nationality has various characteristics and criteria in each country, depending on its traditions. This will be seen in how national status will be attached to each individual. At least nationality will be based on two main principles, namely based on descent (*ius sanguinis*) and the principle of birth (*ius soli*). Other types of the two principles include the naturalization process, the granting of political asylum to the lottery model.

The principle of heredity (*ius sanguinis*) will usually lead to the formation of ethnic nationalism and ethnocultural nationalism, which are based on myths regarding the similarity of ancestors and the ownership of the homeland that they inherit. Thus, this conception will emphasize physical evidence of descent, language, and religion. Finally, this vision will lead to a less democratic society because it will always highlight the exclusivity of tribal culture.

Meanwhile, the principle of birth (*ius soli*) will lead to the strengthening of civic-nationalism (Harjanto, 2002, [9]). In civic nationalism, a nation is built on a social contract that safeguards common interests. This conception can in some ways accommodate ethnic and cultural differences as long as the state is able to maintain its neutrality. In short, this model offers a vision of a community of equal citizens. However, sometimes they are not necessarily participatory democracies, moreover they are uprooted from their historical precedents and roots and are highly dependent on individual volunteerism, and are often created as myths for the benefit of the majority to camouflage while subordinating the minority.

Furthermore, the ideal nationality that must be addressed for a plural society like Indonesia is a combination of the concepts of civil and ethnic nationalism. In a pluralistic society and in the context of a global society, there is at least an alternative vision worth considering, namely multicultural nationalism. The proponents of this model of society believe that to create a socially just society united by shared values, so that a social and political ideal of togetherness in difference is realized (Rawls, 1971, [10]).

True nationalism will strengthen social cohesion between people. The community will get a binding spirit that can jointly encourage the attitude of defending the country in the face of the threat of globalization. Pride and awareness of protecting the interests of the nation built on nationalism will provide energy for the community to want to contribute to the progress of the nation.

Therefore, facing the era of globalization, the Indonesian people must not adopt the wrong notion of nationalism, no matter how strong the currents of interdependence are. In order to face external threats, Indonesia must always foster and maintain national unity and integrity. Meanwhile, to foster and maintain Indonesian nationalism, the main requirements are readiness and persistence as well as flexibility in elaborating forms of nationalism that are more relevant to the challenges of the times. Whatever the form of nationalism, it must be adapted to the conditions of a pluralistic Indonesia, accompanied by a clean, transparent and accountable government.

2.4 Indonesian State Defense Concept

Defending the State is the attitude of every individual with a spirit of unyielding struggle in the soul of the Sapta Marga, based on faith and devotion, intending to be selfless and willing to sacrifice to defend the country based on his professionalism and integrity to jointly achieve the goals of a safe country on the basis of Pancasila and the 1945 Constitution for the glory of the State (Hadi, 2013, [11]). Meanwhile, according to Law no. 3 of 2002 concerning National Defense, what is meant by defending the country is the attitude and behavior of citizens who are inspired by their love for the Unitary State of the Republic of Indonesia (NKRI) based on

Pancasila and the 1945 Constitution of the Republic of Indonesia in ensuring the survival of the nation and state. Defending the country is not a duty and responsibility that must be carried out by the military or security personnel alone. However, this is the right and obligation of every Indonesian citizen to defend according to the ability of each individual with the aim of ensuring the survival of the nation and state.

State defense has basic values that must be met to make it happen. Ferrijana, etal (2019 [12]) explain these basic values, including:

1. Motherland Love. We need to love this vast and resource-rich country. The awareness of defending the country that exists in every community is based on love for the homeland.
2. National and State Awareness. Awareness of the nation and state is an attitude that must be in accordance with the nation's personality which is always associated with the ideals and life goals of the nation.
3. Pancasila. Pancasila is a unifying tool for diversity in Indonesia, which has a variety of cultures, religions, ethnicities, and others. These Pancasila values can break every threat, challenge, and obstacle.
4. Willing to sacrifice for the Nation and the State. In the form of defending the country, of course, there must be an attitude of being willing to sacrifice for the nation and state.
5. Have the ability to defend the country. The ability to defend the state can be realized by maintaining discipline, tenacity, working hard in carrying out their respective professions.

This state defense education is important because it is a legal requirement. By law (pointing to the 1945 Constitution Article 27 paragraph (3) "Every citizen has the right and obligation to participate in the defense and security of the state", and Article 30 Paragraphs (1 and 2), every citizen has the right and is obliged to participate in the defense and security of the state", State defense and security efforts are carried out through a universal people's defense and security system by the Indonesian National Armed Forces and the Indonesian National Police as the main force and the people as the supporting force".

In addition to the 1945 Constitution, in Law Number 3 of 2002 concerning National Defense Article 9 Paragraphs (1 and 2) it is stated that every citizen has the right and is obliged to participate in efforts to defend the country which is realized in the Implementation of National Defense. In addition, the participation of citizens in efforts to defend the country is carried out through civic education, compulsory basic military training, voluntary or mandatory military service, and professional service.

III. METHODOLOGY

This type of research is library research, which is a series of studies related to library data collection methods, or research whose research objects are explored through various library information books, theses, scientific journals, articles and government regulations (Syadiah, 2009 [13]). Literature review or literature research is research that examines or critically reviews knowledge, ideas, or findings contained in the body of academic-oriented literature, as well as formulating theoretical contributions.

The analysis in this study uses the concept of cyber defense and the concept of defending the state in Indonesia. The concept of cyber defense is based on the 2014 Cyber Defense Guidelines for the Republic of Indonesia. Meanwhile, the concept of defending the country by Ferrijana, etal (2019 [12]) which explores the implementation of the basic values of defending the country and is associated with various aspects related to the phenomenon of cyberspace metaverse.

IV. DISCUSSION

The Metaverse Cyberspace not only offers convenience and new experiences in human interaction, but also provides potential insecurities that need to be aware of. Metaverse is able to provoke human desires that are difficult to realize in the real world. There, everyone is free to do anything without having to deal with the government, bureaucrats, and law enforcement officials. This will fulfill the needs of unlimited human desires.

On the other hand, technological progress cannot be denied, because if it is rejected then humans will be left behind and backward.

As mentioned earlier, that one of the threats to national defense and security posed by the metaverse is the spread of harmful ideologies or thought provocations. From a preventive perspective, the threat aspect of the existence of this metaverse opens up opportunities to trigger cyber threats and attacks, which include aspects of ideology, politics, economy, social, culture, nationality, as well as other aspects related to the life of the nation, state and society, including personal interests. The threat can be carried out by actors representing the government (State Actor) or non-government (Non State Actor), so that the perpetrators can be individuals, groups, groups, organizations or even a country.

Facing these threats, according to the cyber defense guidelines, humans are the main asset in the success of cyber security. The biggest challenge in implementing cyber defense is to provide competent human resources who are ready to follow the dynamics of the cyber environment that continues to develop and nationalism. From this point of view, the attitude of defending the country becomes very important. The attitude of defending the state as the implementation of ethics in the state can be self-control for individuals when they get provocation in cyberspace.

The attitude of defending the country contains the values of nationalism and national characteristics that must be embraced by every citizen. Everyone who has an attitude of defending the state will act by prioritizing the wider interests (the state) rather than personal or group interests. The attitude of defending the country will limit the behavior of metaverse users from acting recklessly which results in the loss of the general public and even losses that lead to security threats. Defending the State becomes a bulwark for freedom in cyberspace which tends to be out of control.

As a real effort to increase awareness of defending the state of Indonesian citizens, the Ministry of Defense of the Republic of Indonesia as one of the institutions authorized and interested in fostering an attitude of defending the state always campaigns for this attitude. The Ministry of Defense is currently drafting a Grand Design for State Defense Awareness Development (PKBN). The preparation of the Grand Design of State Defense Awareness Development (PKBN) for 2015-2040, is used as a common reference in building the character of defending the country, there is a basis for implementing PKBN, so as to create an understanding in order to realize a common pattern of thought and action in an effort to create Indonesian citizens who have self-defense awareness. state, in the context of welcoming a century of independent Indonesia (1945 – 2045).

Although the Ministry of Defense has compiled the Grand Design of PKBN, education on state defense awareness can only succeed if the entire nation is united in unifying steps in voicing the spirit of defending the country and multicultural nationalism. The participation of citizens in the form of State Defense efforts based on Law no. 3 of 2002 concerning National Defense is held through Citizenship Education, compulsory basic military training, voluntary and obligatory service as Indonesian National Army soldiers and professional service. However, basically the defense of the state rests on the awareness of every citizen of their rights and obligations. Awareness of State Defense needs to be continuously grown, including through formal and informal education processes. In addition, every citizen also needs to be made aware of the possibility of threats to the existence of the Indonesian nation and state, both domestically and externally, including from cyberspace.

Furthermore, the Ministry of Defense in collaboration with relevant stakeholders plans to establish state defense agents in every region throughout Indonesia. State Defense Agents who act as agents of change (real & virtual world) at the Provincial and Regency/City levels are tasked with campaigning for the values of defending the country directly or indirectly through internet media. With the existence of state defense agents, it is hoped that they will be able to fill cyberspace, especially in the metaverse, with positive content and trends and against destructive propaganda.

This state defense program was initially directed to instructors or state defense coaches. In the future, these trainers will provide guidance to form State Defense Agents from elementary school to university level. The technical program for the formation of agents will be carried out at military education depots or government education and training centers. In this training, agents will be taught the values of defending the country and their application in everyday life, including in cyberspace. The values taught such as love for the homeland,

awakening the nation and state, reassuring Pancasila as the ideology of the state, and being willing to sacrifice. In addition, agents also need to be equipped with basic cyber skills such as news analysis,

In addition to the state defense awareness development program by the ministry of defense, there is also the Mental Revolution Movement. This program was launched by the government to build the nation's deterrence in facing the complexity of threats. The participants of the mental revolution program are wider and the variety of activities is more varied. It is hoped that this will trigger awareness of defending the country with a soft approach so that everyone voluntarily becomes a part of this movement. With a mental revolution, every group will have the opportunity to raise awareness of defending their country in ways that are more flexible and far from militaristic like the previous program.

V. CONCLUSION

The existence of a virtual world in the form of a metaverse will trigger an expansion of the security spectrum. This is because everyone in the metaverse is free to do anything without having to deal with the government, bureaucrats, and law enforcement officials. This uncontrolled behavior poses a threat that is not limited to individual security (such as cyber bullying) and will even have an impact on public security and even state security (radicalism and terrorism propaganda). Facing this threat, all citizens are required to be able to filter information and always be careful in their actions. From this point of view, the state defense becomes very important. The attitude of defending the state as the implementation of ethics in the state can be self-control for individuals when getting provocation in cyberspace.

The attitude of defending the country needs to be campaigned to build collective awareness. The Indonesian government, through various programs and movements, has pursued this campaign. This action is a preventive initiative of the government so that when metaverse becomes a lifestyle of the people in the future, the Indonesian people are ready to face various potential threats with state defense.

REFERENCES

Books:

- [1] Arifin, Z, *Keamanan dan Ancaman pada Cyberspace.*, Universitas Terbuka, 2020.
- [4] Lorenz, Edward. *The Essence of Chaos*, London: University College London Press, 1993.
- [10] Rawls, John. *A Theory of Justice*, Oxford: Oxford University Press., 1971.
- [12] Ferrijana, S., Basseng, Sejati, T., *Modul Wawasan Kebangsaan dan Nilai-nilai Dasar Bela Negara*, National Institute of Public Administration Indonesia, 2019.
- [13] Syaodih, S.N, *Metode Penelitian Pendidikan*, Bandung: Remaja Rosdakarya, 2009

Theses:

- [11] Hadi, Y, *Dinamika Penanaman Nilai-Nilai Bela Negara Kadet Maguwo Dalam Perspektif Historis*. Doctoral Dissertation, UNY, 2013

Journal Papers:

- [5] Manggala, P.U., *Strategi Pertahanan dan Keamanan Nasional Indonesia*. Jurnal Kajian Lemhannas RI Vol. 26, 2016
- [6] Martono, K.T. *Augmented Reality Sebagai Metafora Baru Teknologi Interaksi Manusia dan Komputer*, Jurnal Sistem Komputer, Vol. 1, No. 2, 2011

- [7] Indrawan, R.M.J dan Efriza. *Bela Negara Sebagai Metode Pencegahan Ancaman Radikalisme di Indonesia*. Jurnal Pertahanan dan Bela Negara. Universitas Pertahanan Republik Indonesia. Vol. 7 (3), 2017.
- [8] Supardan, D. *Tantangan Nasionalisme Indonesia Dalam Era Globalisasi*. Jurnal Lentera: Ilmu-ilmu Sejarah, Budaya dan Sosial Vol. 2 (4), 2011.
- [9] Harjanto, Nico, T., *Antara Kebangsaan dan Kewarganegaraan*, dalam Indra J. Piliang, Edy Prasetyono, Hadi Soesastro, *Merumuskan Kembali Kebangsaan Indonesia*, Jakarta: Centre for Strategic and International Studies, 2001

Articles:

- [2] Hermansah, T. *Metaverse, Ancaman Dunia Sosial Kita?*, UIN Jakarta, 2022.
- [3] Wantiknas, *Keamanan Siber sebagai Fondasi dan Enabler Transformasi Digital di Indonesia*, National ICT Council, 2020.