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ΝΟΜΙΚΗ ΒΙΒΛΙΟΘΗΚΗ

Civil liable persons by improperly fulfilled Telemedicine

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A. The Problem

The recent application of Triton Company for health monitoring through tablets is nowadays applied on 10.000 patients in 6 States of USA. In this way patients save time and money. This is the culmination of an evolution in the implementation of telemedicine.[1] The origins of this evolution are traced back to 1920 in New York, where the religious community of Christian sailors offered its members telemedicine by radio. Later in 1950 telemedicine was applied in remote areas of USA and in 1960 it was applied in the space for the monitoring of the health of astronauts. On the other side of the Atlantic, in the Mediterranean, and specifically in Italy, telemedicine was applied at Centro Internationale Radio Medico since 1935 for the provision of medical assistance to the crews of ships within the Italian borders, irrespective of nationality of the ships[2]. Nowadays it is also applied on ambulances in European countries such as Germany, Sweden, Holland, Austria and Great Britain[3]. In Greece it is applicable during the last three decades either to public hospitals, such as the Hospital of the Greek Navy and the "Syggros" Hospital, or privately, either by the application of Vodafone or through the funding of the European Program of Telemedicine Leonardo Da Vinci[4]. Some landmark cases regarding the application of telemedicine worldwide are worth mentioning note.

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1. See Brey, "Self-Identity and the Evaluation of Medical Technology", in: *Kanellopoulou-Boti/ Panagopoulou-Koutnatzi, Bioethics Considerations II* (2016), pp. 53-66 (in Greek).
2. *Licinio Angelini/Vasilios Papaspyropoulos*, "The State of Art of Telemedicine in Italy", IV Department of Surgery, University of Rome "La Sapienza", working under the creation of the Popular Athens University Hospital telemedicine program.
3. *Katzenmeier/Schlag-Slavu*, "Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst" (2010), pp. 151-168.
4. "Details on the Application of Telemedicine in Greece, the three models of telemedicine and the issue of non-fulfillment of personal medical treatment contract" in Laskaridis, *Telemedicine and Liability* in: *Kanellopoulou-Boti/Panagopoulou-Koutnatzi, Bioethics Concerns* (2014), pp. 477-498 (in Greek).

In 1988 the Soviet Republic of Armenia was hit by devastating earthquakes. In order to help NASA applied a program of medical assistance named *Space Bridge in Armenia* that was applied through a satellite. In this way any political and economic dispute between USA and USSR was overcome[5].

Another incident, in April of 1995 in Beijing is well known. Tsou Ling, a female student fell into coma. In the hospital of Beijing the physicians were unable to diagnose the cause of that sudden loss of consciousness. Students of the University of Beijing sent electronically an SOS-mail in which they stated the signs and symptoms of the patient in order to facilitate the finding of the disease. Eighty-four doctors from all over the world replied by diagnosing a rare form of encephalomyocarditis (Guillain-Barre syndrome) which gave Chinese doctors the opportunity to administer the proper treatment[6]. That incident highlights the contribution of telemedicine not only to the improvement of health of people but also facilitates the dissemination of medical knowledge in isolated areas.

Telemedicine is the combination of telematics and medicine. The transmission of information via networks in foreign countries arises international private law and protection of personal data questions. This study will not address to these matters. The latter question will stay out of the scope of our research since it cannot be analyzed in such a short time[7]. The civil liability of physicians involved includes both contracts of medical opinion (rendering of medical opinion) and medical treatment (rendering of treatment). Intro-contractual liability has a broad scope since even in cases with no contract since an agreement between the physician and the patient or the physician and the tele-physician can be concluded from the circumstances. Common contracts such as quasi contracts in French-roman law systems and ordinances of benevolent intervention in another's affairs in German law systems concern patients in coma. Finally, the electronic mailing of anonymous data of patients for second opinion will not be examined because in this case there is no telemedicine error[8].

B. Civil liable persons case-by-case

I. Improper sending of instructions from tele-physician.

The improper exercise of telemedicine except for the other factors that will be reported can be also owed in negligence of physicians. An erroneous diagnosis can

5. "Telemedicine Research Centre: What is Telemedicine?/History of Telemedicine» in http//: 208.129.211.511what'stelemedicine.asp.
6. Zhu Ling's Case, http://www.rdsci.ucla.edu/telemed/zhuling.
7. See indicative *Laskaridis*, "Elektronische Patientenakte" (2003), p. 286 et seq.; *K. Christodoulou*, "Electronic Documents and Electronic Transaction", 2nd edition (2004), pp. 27-31 (in Greek); *K. Christodoulou*, "Protection of personality and freedom of contract in the social networks" (2007), no. 74 et seq. and for encryptions *Laskaridis*, ibid, p. 264 (in Greek); *C. Sorge*, "The Legal Classification of Identity Based Signatures", *Computer Law and Security Reviews* (2014), pp. 126-136; *F. Aldhouse*, "Anonymization of Personal Data- a missed opportunity for the European Commission", *Computer Law and Security Reviews* (2014), pp. 403-418.
8. Cf. OLG Hamm MedR 1999, 35 and *Ulsenheimer/Erlingen*, in: *Dierks/Feussner/Wienke (eds.)*, "Rechtsfragen der Telemedizin" (2000), p. 67, 72.

be owed in error transport of information to the tele-physician[9] or in omission of demonstration of critical points via web cameras. This erroneous picture of health of patient can lead tele- physician to erroneous diagnosis resulting to a damage of the patient. Liability of tele-physician in this case can be considered only if he knew that the medical results are vague and contradictory because of the pure picture quality[10].

Though, in case of successful data transmission of a misdiagnosis of the tele-physician, the false medical action will give rise to liability. Furthermore the reason for the use of telemedicine is the lack of expertise of the on side physician. It would therefore be oxymoron to raise the argument that the latter did not check the diagnosis or the instructions of the tele-physician to the extent that exactly this lack of specified knowledge is reason for the recourse to telemedicine[11]. A pediatric orthopedic surgeon may resort i.e.to the expertise and guidance of a radiologist. The latter cannot be considered as an agent of vicarious liability since he is liable by himself[12]. Only in case that a) the specific physician is contracted with the patient b) this physician requires from the tele- physician a second opinion and c) the tele- physician is paid directly by the specific physician, could be considered agent of vicarious lability in the degree that by that way "offence in the interests of lender patient" is allowed[13]. For the proof of all the above is necessary the recording of all pictures, sounds and data that are dispatched[14]. A guaranty that this recording of all operations undertaken in relation to telemedicine (e.g. in hard disk) will indeed take place can consist the legislative provision of a strict liability or shift of the burden of proof of negligence from the patient to the physician.

II. Improper implementation from the on side physician

1. Independent physician

If the physician next to the patient undertakes any incorrect medical procedure despite the proper diagnosis and the correct instructions of tele-physician, the liability of the first is taken for granted. Furthermore, if the physician next to the patient a) has a contract with the patient, b) it is proved by the electronic health records or by the recording of tele-operation (e.g. on a hard disk) that he did not follow exactly the instructions, either because of lack of concern or because of lack of skills (e.g. a surgical operation or orthopedic relocation of bones), hence arises the question of contractual liability to the patient[15]. Only in exceptional cases, i.e. when tele-

9. Regarding the incorrect transposition of directives recklessly see *Tsolakidis*, "Responsibility for Actions Vicarious Agents and Servants" (2008), p. 314.
10. *Ploier*, "E-Health und Telemedizin: Haftungsfragen", J Hyperton (2011), p. 15, 31, 32.
11. Cf. *Katzenmeier/Schlag-Slavu*, "Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst", (2010), pp. 79-81.
12. *Ibidem*.
13. This view is supported in Germany by *Esser/Schmidt*, SchuldR I, 2, p. 101.
14. S. *Mason*, "Electronic evidence. A proposal to reform the presumption of reliability and hearsay", *Computer Law and Security Reviews* (2014), pp. 80-84.
15. *Lynn Frendt Shotwell*, "Taming Liability of Telemedical Transactions" http://www.arentfox.com/telemed/articles/taingliab.html.

physician is the contractual part of the patient and the person receiving the payment, it could be accepted that the physician becomes agent of vicarious liability. Co-liability of the physician next to the patient comes into consideration in case he follows instructions of tele- physician which are obviously incorrect as for example during the administration of anticoagulants to hemophiliacs[16]. In such cases though the evidence of causal links would be a really difficult and demanding task[17].

In this constellation of cases the question whether the medical error is the result of a mistaken diagnosis or of tele-physician's fault instructions would be also difficult to answer. Is it possible in that case that the tele-physician would be exonerated by his liability as an agent of vicarious liability? I will attempt later to answer that question by distinguishing these cases in two alternatives. In the first one the patient is contracted with his physician and on the other the patient is contracted with tele- physician.

In the first case there is a contract between the physician and the patient as well as between the physician and tele-physician but not between the patient and tele-physician. In that case tele-physician's liability should come into consideration. An important criterion in the Continental European Law System concerning person's characterization as an agent of vicarious liability is considered to be whether the contract of the person undertaking the assignment with the assistant of achievement can negatively affect the interests of the person who is demanding the supplied services[18]. Actually that is the rule in Telemedicine. Because of it the tele-physician has the opportunity to offer his services to the patient and consequently the occasion to harm patient's interests. This consists a reason for the characterization of the tele-physician as an assistant of achievement of the on side physician. An interpretation at large of article 334 Greek Civil Law can constitute a second reason for this characterization. In relation to this article the tele-physician fundamentally helps his colleague to the fulfillment of the contract even if the first is not contracted with the patient. On the contrary, arguments against the acceptance of vicarious liability between the physician and tele-physician (who is not contracted with the patient) are considered to be a) the demand of the patient for personal execution of the contract by the physician (and not by tele- physician) and b) the fact that the latter usually expresses his opinion by giving instructions exclusively to the physician next to the patient.

Simpler it is the answer to the question of vicarious liability if the patient has been contracted with both physicians. This is usually the case in telemedicine on boats, planes, spaceships and satellites. The ship's physician will usually have a contract for supply of medical services of indefinite duration with the ship owner, while tele-

16. Cf. BGH NJW 1998, p. 1803.
17. Cf. *Ulsenheimer/Erlingen*, in: *Dierks/Feussner/Wienke (eds.)*, "Rechtsfragen der Telemedizin" (2000), p. 67, 72.
18. This view is supported in Germany; see *Esser/Schmidt*, SchuldR I, 2, p. 101. See *Stathopoulos*, "Law of Obligations. General Principles" (2004), §7 no. 58 (in Greek), although with a different justification and *Tsolakidis*, "Responsibility for Actions Vicarious Agents and Servants" (2008), pp. 311-315 (in Greek), in which crucial element for the responsibility of the owner of the case regarding the assistant's fulfillment action is whether this action is evaluative close bond with the delegated act which would constitute fulfillment of delivery and pp. 189-220 for general servant's liability ratio and for assistant's misdemeanors liability ratio.

physician will not be an employee of the latter. In this case the on side physician incurs liability for tele-physician's mistakes. Tele-physician is contractually responsible for compensation or *in natura* rehabilitation of the patient. The German influenced law systems (Germany, Austria, Switzerland, Japan and Greece) would accept a vicarious liability of all collaborating physicians under the condition of an identity of the target of the supplied medical services foreseen in the two contracts[19]. This will usually be the case in telemedicine.

2. Hospital

The answer to the question of the liability of the tele-physician is differentiated in case of telemedical projects of hospitals. If a hospital supports the application of telemedicine and has contracted outsourcing agreements with numerous physicians, then both the hospital physician and the physician outside the hospital constitute assistants of achievement of the hospital and according to relevant provisions would be civil liable[20]. Additionally the hospital would be strictly liable for organizational problems. In the Greek civil law system it is questionable if a person can be characterized as an agent of vicarious liability when the employing person because of lack of experience, knowledge and expertise cannot cognitively check or give instructions to the assistant concerning the demanded assignment[21]. This is the case when a physician is employed. On the other hand the tele-physician cannot be considered as an assistant of achievement if he is paid directly by the patient. A common target of the different

19. *Katzenmeier/Schlag-Slavu*, "Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst" (2010), pp. 80-82.

20. *Hoppe*, "Telemedizin und international Arzthaftung", MedR 1998, pp. 462-469.

21. Greek Supreme Court 1270/1989 Nomos = EllDni 1991, p. 765, where it was judged that a relationship of agent between physician and clinic exists partly because of loose dependence of the physician from the clinic, as a result of the general directives given from the clinic to the physician, secondly because of the necessity of liability in tort of the clinic for the errors of physicians working there, bearing in mind that the clinic exploits the work of physicians, gaining from them, by collecting from their patients hospital charges; Greek Supreme Court 1226/2007 Nomos, in which there is a relationship of agent and on contracts of independent services between physician and clinic owner (non-medical); Court of Appeal in Athens 1362/2007 Nomos = EfAD 2008, p 62, according to which the establishment of liability, as agent, of the clinic where the doctor treat the patient victim, requires only a loose dependence of the latter in terms of the place, time and conditions of work of the physician; Court of Appeal in Athens Nomos 1429/2012, in which it was considered that the doctor transferred by ministerial decision from a public hospital to a legal entity governed by private law becomes part of the staff of the last and has a relationship of agent with it, if it is not required for the hospital to provide the physician with specific guidelines but only general, in terms of place, time and conditions of work of the physician; See for example Court of Appeal in Athens 1683/2014 Nomos where it was considered that there is a relationship of agent according to article 922 of Greek Civil Code between the hospital and the orthopedic doctor working at the hospital, who is responsible for the death of the patient because of hemorrhage from the stomach, since the doctor provided his services at the second defendant's (appellant in cassation) hospital , using all the machines, operating rooms and staff of the hospital, and the related facilitations offered to him, and thus the physician depended somehow on the owner and the hospital administrator regarding the place, time and his conditions of work at the hospital.

contracts for supply of medical services would usually exist and that will speak for the acceptance of a vicarious liability on German influenced law systems as that of Greece. If the hospital is public, therefore special provisions as the articles 105-106 of the Introductory Law of the Greek Civil Code are applied.

The lack of payment in consultation through blogs or hotlines does not consist a criterion for the acceptance of relation of comity because the law of contracts acknowledges also unpaid contracts such as the donation and the unpaid deposit[22]. A very important task of health professionals who may be inferred from the contract or by the law of good faith (faith obligation transactional or welfare) is to have an alternative data communication path. They should dispose i.e. beyond the ISDL another connecting line as the straight line employed (lease line point to point), or satellite link or at least one telephone connection. This requirement should be as higher as the biggest danger, and cost the medical interventions that are used in these connections. For example one network is enough for sending a diagnosis. For operation of open heart with the help of telemedicine, an alternative telephone line will not be enough, but it will be necessary a payable direct line, and additionally a satellite connection in case that neither the ISDN connection nor payable correspond are interrupted. For the contracted parties which did not take into consideration the alternative forms of connection, they will have to share the liability.

III. Improper functionality of IT systems

1. Incorrect choice of hardware-software and updating

a) The Network Provider

In order to transfer electronic information, the use of telecommunication networks is indispensable. When the transmission of information is interrupted due to Telco provider's fault, though, civil liability issues emerge[23]. This is more common in medical procedures implemented under enormous time pressure as for example tele-operations or tele-diagnosis or remote instructions in an emergency. In these cases both the pecuniary (i.e. an ungovernable merchant ship because of captain's medical fault) and the moral damage can be enormous (e.g. lack of signal during the tele-childbirth from midwife with instructions' provision by tele- physician)[24]. A contractual liability of the Network Services Provider cannot be excluded in these cases. The legal nature of network services contract can be specified by the contracting parts, who can agree on additional offered services. The network services contract is usually characterized as a mixed contract or a supply of services contract[25]. In the case of simple transmission of

22. Cf. *Androulidaki-Dimitriadis*, "The requirement for patient's information " (1992), p. 103 et seq.
23. See on K. Christodoulou, "Protection of Personality and Freedom of Contract in the Social Networks" (2007), no. 1 and 4 (in Greek).
24. See the movie "3 Idiots" from 2:19:00 and after.
25. *K. Christodoulou*, Electronic and Civil Law Compendium, 2008, no. 132 (in Greek). At European level the provider's objective liability is excluded by the Article 15 Directive 2000/31. Nevertheless, according to the Article 71 (4) of Greek Law, the providers' objective liability is fully justified because the use of networks that is considered to be new technology, is as-

data the contract should be classified as rental whereas in the case of parallel storing of the tele-medical conference the services type of servicing will prevail.

In any case the consequences of a breach of contract will be the same and the framework of contractual liability should be applied. Of particular interest is, in such cases, the implementation of the Economic Analysis of Law in determining the degree of diligence and the limit of cost of IT security measures the provider should demonstrate[26]. It has already been mentioned that the interests that are at stake in telemedicine are huge and therefore the Network Services Provider knows that they should take increased and sometimes expensive security measures for the infrastructure used in telemedicine. The provider can anyway include the cost of these extra measures in their offered price.

The network's owner cannot invoke liability of others for his improper conduct[27]. The proper function of networks apart from public interest[28] constitutes an obligation towards consumers who have the right to enjoy this communal good (article 966 Civil Code)[29]. This recommends justification of security intervention of the legislator concerning the issue of prices of networks used for medical reasons by vulnerable persons[30]. Moreover the contract between the Service Provider and the Customer User of the network line constitutes contract with reflective impact on third party. As a result the patient may have the right to invoke that reflective impact in order to exercise his claims against the network provider.

A simple measure which could be required by tele-physician in serious medical procedures such as tele-surgery or tele-therapy, is maintaining a single telephone line, in addition to the electronic connection, so that in case of malfunction of the ISDN or satellite connection the voice connection between the physician will at least maintain. An Intranet can also constitute a proper solution to the above mentioned danger[31]. This of course is a matter of agreement between the contracted participants, the so-called service level agreement. New technologies though as the 5G technology will overcome our concern for connection assurance measures.

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sociated with big and massive risks for the whole society, similar to the use of cars, trains, oil tankers, airplanes, but also of dangerous animals and constructions; Cf. see on ibid, no. 135. Cf. in Germany Oetker, Das Dauerschuldverhältnis und seine Beendigung, 1994, p. 232 and Rainer, Schuldrechtliche Organisationverträge in der Unternehmenskooperation, 2000, p. 23, who takes about "contracts of cooperation".

26. K. Christodoulou, "Electronic Compendium of Civil Law" (2008), no. 138 (in Greek). Cf. Gao/ Yao, "Chaining cyber-titans to neutrality: An updated common carrier approach to regulate Platform Service Providers", in: Computer Law & Security Review (2015), pp. 412-421.
27. Ibid, no. 17.
28. K. Christodoulou, "Protection of Personality and Freedom of Contract in the Social Networks", (2007), no. 28-31 (in Greek).
29. See on Laskaridis in: Georgiades Brief Comments in Civil Code, Article 966 (in Greek).
30. K. Christodoulou, "Protection of Personality and Freedom of Contract in the Social Networks" (2007), no. 410, no. 503 (in Greek).
31. See on the K. Christodoulou concept, "Protection of Personality and Freedom of Contract in the Social Networks" (2007), no. 33 (in Greek) and for using them for electronic medical data Laskaridis, "Elektronische Patientenakte" (2003), p. 193, 201, 354 and for data on the use of these networks in Germany at p. 283, no. 820.

b) The Programmer

In case of programs of the self for teleporting audio, video and data the seller of this program should not be responsible for their inefficiency by telemedical use since there are not designed for this use[32]. Otherwise is the case where the sales company has refined its programs only for telemedicine, which is the case nowadays mainly in the USA.

In this unlikely last case the seller company is contractually liable due to the guarantee[33]. In the rest cases such a responsibility cannot be accepted. Thus for example if the Skype connection collapses with consequence the cause of damage to the patient, this company cannot be responsible since it is well-known a low compressed rate of data. More likely would be to charge the involved physicians or the medical firms for selecting this program. In Continental Europe the right choice of tele-medical programs constitutes a warranty of the contract of telemedicine, whose breach could lead to a breach of contract. On the contrary programs with high compression rate such as WebEx does not arise a question of contractual liability of the physician[34] .

However, if a developer is contracted with the hospital to create a telemedical program then it could be considered that the latter constitutes assistant of the hospital, especially if there is a contract for that. In this case the hospital should bear the responsibility towards the patient if the program is not responding. If the program though has been once generated and sold off, a liability of the hospital or the telematics services company should be excluded. Probably in terms of a labor contract between the programmer and the medical unit with reflective impact to a third party i.e. the patient[35]. This is accepted both in the German and Commonwealth Law Systems under the concept of duty of care[36]. This will not be accepted in French Roman law Systems where such expansion of contractual claim is not foreseen.

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32. Regarding the fact that computer programs are a thing and not services see "Indicative Note", Computer Programs in Michigan Law Review (1979), p. 1149 et seq. and Advent System Ltd. v. Unisys Corp 925 F. 2d, p. 679, 675 et seq.
33. See another opinion regarding the legal nature of experienced programs C. Mouzoula "Artificial Intelligence. Liability issues in the expert system development processes", Arm 1981, p. 826, 828 (in Greek).
34. For the different custom-made software handling and the software of massive production see Mouzoula, The implementation of information technology in medical science. The civil liability of the producer because of the use of defective software, Arm 1988, p. 1264, 1265 (in Greek).
35. For examples of contract with protective effect for a third party in medical law see Fountedaki, "Medical liability" (2003), p. 264, 275-277 (in Greek); Stathopoulos, "General Obligations Law" (2004), § 4 no. 63-67 (in Greek); Karampatzos, "Vom Vertrag mit Schutzwirkung für Dritte zur deliktischen berufsbezogenen Vertrauenshaftung" (2005), passim. Contract with protective effect for a third party of course differs from the contract to third. For the contract with protective effect for a third party and its conditions of this see Ap. Georgiades, "Law of Obligations. General Part" (2015), § 3 no. 41-42 and § 34 no. 21 (in Greek).
36. See on this criterion from the dictum of Lord Atkin Dononghue v. Stevenson [1932] AC 562. See further Anns v Merton LBC [1978] AC 728; Caparo Industries Plc v Dickman [1990] 2 AC 605 and Australian decision Sutherland Shire Council v. Heyman [1995-1995] PNLR 238.

c) The Hardware manufacturer

It should be assumed that physicians should not perform telemedicine when their electronic systems are not capable enough to properly execute the operation of telemedicine programs[37]. This thoughts are followed by the tele medical guidelines of the American Association of Radiology, according to which physician and legal persons involved in telemedicine are obliged to update the supplied IT Systems. The patient information about the potential risks from the use of obsolete systems should not be considered a solution and reason for the exemption from the responsibility of physicians, because this would constitute a prohibited exclusive clause from all jurisdictions for breach of the right to life and health. If, however, false information has been given by the manufacturer, it should be accepted his contractual liability.

2. Malfunction of IT-Systems and Informed Consent

In any case of malfunctioning of the programs, PC and other hardware, liability concerns those who do not maintain, renew or properly regulate these machines. A fatal delay or disruption of connection will ground liability of those who did not comply with the requirements imposed by the duty of care[38]. The German legal system has developed a rebuttable presumption according to which, in case organizational deficiencies will not prevent the implementation of controlled risk, it is due to those making the treatment, i.e. if the specific physician simply receives diagnosis, then he, if instead treating undertakes tele- physician, the latter will be liable[39].

A primary obligation of the physician constitutes the worldwide obligation of the patient not only to be informed for treatment risks but also for its cost. In Telemedicine an exemption of this obligation cannot be made. Hence if the on side physician or the tele-physician fails to mention the dangers of telemedicine then questions of insulting patient's personality, and of contractual liability for improper execution of the contract are raised. The Greek Supreme Court may accept guilty of both kind of physicians, as it has done so far in such cases of failure to inform properly the patient[40].

C. The prospective of telemedicine

In a statement of the European Commission to the European Parliament, the European Council, the European Economic and Social Commission and the Council of Regions on the Use of Telemedicine in Patients and Health Systems (KOM 2008, dated November 4) reported that telemedical systems should be improved to take strategic through actions of the EU and Member States such as the creation of European networks of an appropriate level.

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37. Cf. Ploier, "E-Health und Telemedizin: Haftungsfragen", J. Hyperton 2011, p. 15, 31, 32.
38. *Katzenmeier/Schlag-Slavu*, "Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst" (2010), pp. 80-82.
39. OLG Hamm VersR 1998, 1243 und *Kunz-Schmidt, MedR* 2009, p. 517.
40. See in this case District Court of Athens 1449/2007 Arm 2009, p. 1006 and details about the question of liability of the involved doctors Kanellopoulos-Boti in Laskaridis (ed.) ErmKID (2013), Article 11 no. 4 (in Greek).

The country of overregulation, Germany, already has issued Law for Health Telematics (Gesundheistelematikgesetz) and regulations for Telemedicine which may be found in the Law on Protection of Personal Data (Datenschutzgesetz) and Electronic Commerce (E-Commerce Gesetz). In the USA alone scientific organizations as the American College of Radiology have issued Standards for Telemedicine, which defines procedures, required equipment and training of personnel, authorized to exercise the relevant medical procedures and quality controls of radiology. Furthermore the federal state of Oklahoma has issued the Oklahoma Telehealth Act.

The solution to the dangers of telemedicine is not legal. Training and ISO certification of every Tele-physician should be mandatory in order to ensure proper exercise of Tele-medicine. *Ulsenheimer* and *Heinemann*[41] suggest aggravating the liability against the tele-physicians in case of lack of education of the participants in telemedicine. I oppose, however, the establishment of an ISO for telemedical systems because this institution will significantly restrict the exercise of telemedicine, especially for those physicians who do not have an advantage of capital. Only a proof of updating services on the existing equipment is sufficient[42].

Ismene Androulidaki-Dimitriadis who has established the cornerstones of medical law in Greece, emphasizes in her book "The informed consent of the patient" (1993) that tele medical services should be covered by social security services and funds which seven years ago foresaw in the USA in the Patient Protection and Affordable Care Act seven years ago. This constitutes a broad recognition and strengthening of telemedicine. However, we must never forget that physicians treat people, not machines. Human contact, the aura of our physician and our patient's gratitude smile are things we are going to miss in a future full of machines and gadgets and will isolate us mentally even more, negatively impacting on our mental and physical health and reducing the place for human existence and contact on both sides.

41. MedR 1999, p. 197, 200.

42. BGHZ 95, 63, 71 et seq and Wirbel-Rusch, "Telemedizin" (2001), p. 88 *and Katzenmeier/ Schlag-Slavu,* "Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst" (2010), p. 100.