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### Conference Paper

The distribution of IT in Europe's rural areas (Objective 1 and 5b), its current state-of-the-art and its potential role for future economic developments: A survey of local actors in Europe's rural areas

38th Congress of the European Regional Science Association: "Europe Quo Vadis? - Regional Questions at the Turn of the Century", 28 August - 1 September 1998, Vienna, Austria

### Provided in Cooperation with:

European Regional Science Association (ERSA)

*Suggested Citation:* Muller, Jeanette (1998) : The distribution of IT in Europe's rural areas (Objective 1 and 5b), its current state-of-the-art and its potential role for future economic developments: A survey of local actors in Europe's rural areas, 38th Congress of the European Regional Science Association: "Europe Quo Vadis? - Regional Questions at the Turn of the Century", 28 August - 1 September 1998, Vienna, Austria, European Regional Science Association (ERSA), Louvain-la-Neuve

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**Regional Science Association  
38th European Congress  
Vienna, Austria  
28 August – 1 September 1998**

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*The Distribution of IT in Europe's Rural Areas (Objective 1 and 5b), its Current-State-of-the-Art and its Potential Role for Future Economic Developments: a Survey of Local Actors in Europe's Rural Areas*

**Abstract**

The transformation to an information society has led to a diminishing importance of proximity as a factor for local economic development. Information technology (IT) is being regarded as one of the most important means for reducing spatial disadvantages, particularly for rural areas. The purpose of this paper is to examine the distribution and the role of IT in Europe's rural areas.

Firstly, two overall issues are discussed: (1) the opportunities IT offers for the development in rural spaces, and (2) the use of computing equipment on a local level in rural areas. Secondly, this paper explores these two issues by looking at local authorities / local development agencies who benefit from the Community Initiative LEADER. This study focuses on two aspects: (1) the availability of such facilities in general, and (2) the actual access to information resources such as the Internet. The results of this survey show that despite of a general trend within local authorities to improve their computing facilities there is significant variation in the availability between the European regions. Overall, most local actors are confronted with a considerable lack of adequate computing facilities as well as extreme deficiencies in adapting to such facilities. As a consequence, I will point out (1) the necessity of the establishment of such facilities and (2) ways in which IT can help those areas to increase their competitiveness and increase their economic potentials. Finally, I will develop a future scenario of IT in Europe's rural areas.

## **Introduction**

In the past few decades, two major processes have taken place in Europe and beyond. One must actually talk about a dual development: On one side, the internationalization and globalization of production and trade have resulted in increasing distances between (co-operating) actors. On the other side, the transformation to an information society has led to a diminishing importance of proximity as a factor for local economic development.<sup>1</sup> Teleconferencing, videophone, intelligent terminals, etc. have facilitated and constantly accelerated this transformation process in recent years. Therefore, the use of such information technology (IT) is being regarded as one of the most important tools for reducing spatial disadvantages, particularly for rural areas. Both processes, internationalization and the technological transformation, must not be looked at separately as they are strongly interlinked, or even interdependent: In fact, the international economies require an adequate telecommunications system, and, vice versa, new technologies stimulate and foster international activities. Both issues have been explored in a vast amount of literature. Most of the research has explored those developments in the private sector from an economic point of view, only sometimes from other perspectives such as sociological or cultural backgrounds. However, yet the use of IT in public institutions, eg. administrative bodies, has rarely ever been examined. Therefore, it is crucial to gain further knowledge on the use of IT by such actors as IT has also become increasingly important in the public sector as will be demonstrated in the course of this paper.

In the first part, I will briefly review some selected articles, which have already investigated developments in IT on a regional and local level generally as well as in (Europe's) rural areas in particular. The core of this paper, however, is based on an empirical study, which has been carried out as part of a wider survey on the EU Initiative LEADER in early 1997. I examined the distribution of computing equipment and access to information resources such as the Internet of the local organizations benefiting from the LEADER scheme, the so-called LEADER action groups. The findings of this study will both provide some information on the distribution of IT as well as giving an insight into the extent to, and ways in which such facilities are used by those actors. This paper will then conclude by giving answers predominantly to the following two questions:

- Are IT and/or telematics simply a welcome additional equipment in local administrations, or have they become crucial for the success of their day-to-day work?
- What might be the benefits of IT and/or telematics for local (economic) development agencies in Europe's rural areas in the future?

## **I The rôle of IT in Europe's rural areas**

The introduction and use of IT has become particularly important for the development of rural and/or peripheral regions of Europe as they „are characterized by technological backwardness and relative isolation“ (Ilbery et al. 1995: 56). IT will not only improve the technological standards and reduce the geographical isolation, but it will also help eliminate many other disadvantages of rural spaces through a number of benefits<sup>2</sup> which will be examined in this paper. Nevertheless, one must not overlook the obstacles, which need to be overcome when envisaging the application of IT. In the following sections, existing literature on the use of IT on regional and local levels will therefore be briefly summarized and presented. Moreover, both the advantages (*or opportunities*) and disadvantages (*or obstacles*) shall be discussed here.

### **1 Use of IT on regional and local levels in rural areas**

Initially, the use of IT was mostly restricted to urban agglomerations, and has then gradually expanded to Europe's rural areas, and even to the peripheral regions (Müdespacher 1990: 113). Most of those rural spaces can be identified as „new areas of growth, ... [which] are far from uniform“ (Dunford 1989: 20). If this was true, IT cannot be found in the majority of Europe's rural areas as they must not be classified as „areas of growth“. Overall, IT facilities in rural areas are certainly considerably less frequently available than in urban regions. The reasons for the relatively small number of institutions and firms applying IT in the peripheral regions are not based on different attitudes of actors in rural areas towards new technologies. Instead, economic restrictions are, according to Müdespacher (1990: 116), the main reason for the lack of IT facilities in such regions: The firms which have little adopted to date are either too small or are hardly involved in information activities. This means, the financial burden is for most firms too high, and, consequently, new technologies are yet not economically viable and cannot be efficiently applied. Other authors such as Schütte (1990: 321), however, claim that „it cannot be ascertained whether the intensity of use is merely a result of different regional economic structures and their affinities to these technologies, or if it is determined by actual behaviour patterns.“ Other factors which seem to be favourable for the use of application include the nature of the concerned organizations's legal status.

For example, although the composition of regional information and communication users according to economic sectors is generally not known, Schütte (1990: 322) shows that the use of IT in public administration is comparatively small to private firms and other economic actors. The reason for the lack of IT in public organizations such as administrative bodies has not been explained in the literature examined.

Between the regional and local level, „computer-based information systems are identified as a bridge between the regional organisation of public agencies and the local activities of voluntary groups“ (Roome/Whitton 1987: 63). Obviously, this finding also applies to other actors on both the regional and local level. Unfortunately, once more hardly any author distinguishes between public and private actors and their access to IT with the exception of Ilbery et al. (1995: 66-67). They believe that if local administrators want to assist and support local businesses successfully, they must be a „forerunner“ in telematics, not only by using it themselves, but also by

1. „assisting with the development of applications better adapted to the needs of smaller business, and in particular rural businesses;
2. developing services related to the strengths and weaknesses of individual regions, acting locally but linking to global markets, such as integrated international rural tourism marketing services;
3. using these technologies to demonstrate their viability ...;
4. encouraging the use of shared resources, such as telecentres;
5. ensuring a level playing field in the liberalization and privatization of telecommunications ... .“

As a consequence, the distribution, availability and use of IT through local actors strongly depends on the activities undertaken by local authorities as well as other public bodies. For this reason, it is crucial to examine those public actors. But also because of numerous authors who unanimously agree that the availability, the use and the mode of application of IT varies enormously in Europe as well as within individual regions.<sup>3</sup> For example, interregional disparities are not a result of limited availability of IT in some areas but rather of the different ways of using IT and the extent to which it is applied (Irmen 1992: 161). The question however remains: How and to what extent the availability and use of IT differ within European Union.

## 2 Opportunities of and obstacles to IT for local development

In recent years, the application of IT in rural areas has rapidly grown as a result of the increased awareness of local actors in such areas of its potential benefits. This general trend has been „spurred by decreasing costs of (mass-produced) hardware, and increasing value and complexity of (dedicated) applications software. (Arnbak 1990: 11).<sup>4</sup> By that, IT equipment has become affordable in economically, and hence financially disadvantaged areas, which are, traditionally, mostly rural and/or peripheral regions, where generally less resources for economic investments are available.

Soekkha (1990: 3) claims IT to „be an effective tool for the economic management of industrial production and societal activities“ as it

- „rationalizes the procedures for information processing necessary for an effective planning and efficient execution of various tasks in ... public services“ (Soekkha 1990: 3);
- improves and facilitates communication between actors.

Further advantages, or benefits of IT in rural areas are shown in figure 1 below<sup>5</sup>, of which the improvement of the dissemination of information is the most important one in the context of this paper and particularly the results of the study. It can be said that „knowledge in the form of information, has become a key resource in decision-making process and new technologies are currently being developed to help disseminate information more widely“ (Ilbery et al. 1995: 55).

Most research focuses on IT and its influence on business activities. However, it has widely remained unanswered as to what extent (private / public) administrative bodies might benefit from this technological development.<sup>6</sup> Only occasionally, the benefits of IT in local (public) administration are mentioned. For example, Arnbak (1990: 17) states that „it [telematic] is designed to infuse the public network providers with a more entrepreneurial spirit, without losing the essential benefits of maximum connectivity, ... .“ This development has been made possible through „new possibilities of telematics, such as teleconferencing, videophone and intelligent terminals, employees may no longer be compelled to remain in a central workplace“ (Soekkha 1990: 4). Such facilities offers the opportunity for rural populations to remain in their environment, and may possibly even attract migrants from urban areas to settle in more remote places.

**Figure 1: Advantages and disadvantages of IT**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• affordability of IT equipment</li> <li>• reduction of locational (eg. geographical) disadvantages</li> <li>• increase of effectivity of economic management of industrial production and societal activities</li> <li>• obsolescence of immobility of the workforce</li> <li>• improving and facilitating communication between actors</li> <li>• promotion of indigenous rural development</li> <li>• improving dissemination of information</li> <li>• raising levels of business activity and profitability</li> <li>• securing diversified and sustainable rural development</li> </ul>	<ul style="list-style-type: none"> <li>• successful application depends on numerous factors (branch structure, qualifications of workforce, etc.)</li> <li>• complexity of both cultural and organizational problem of combining different attitudes</li> <li>• necessity of co-operation for economic reasons</li> <li>• mutual acceptance, authorization or validation of (the need for) common information by the connected parties is a prerequisite for the use of IT</li> <li>• IT often not adapted to the needs of small rural businesses</li> </ul>

On the other side, the clear trend towards wide-area computer networking and the advantages of IT must be seen in relative terms to some disadvantages, which are also shown in figure 1 above.<sup>7</sup> Firstly, the successful introduction of IT in rural areas largely depends on the four main factors:

- the existing local economic structure;
- the qualifications acquired and held by the local workforce;
- the extent of networking of the regional economy;
- the integration of the local (rural) economy in the extra-regional economy (Müdespacher 1990: 114).<sup>8</sup>

Although there is already IT available in some areas to a larger extent than in others, the ways in which it is used, its efficiency, etc. is still unknown. Consequently, the number of users does not necessarily represent the degree to which IT is beneficial for the area (Müdespacher 1990: 114).

The expenses involved in the application of IT is in some areas a more severe burden on the actors' budgets than in others as, for example, the costs for telecommunications shows enormous differences in an international comparison of the EU Member States.<sup>9</sup> For this reason, co-operation has become necessary for actors in rural spaces in order to keep costs down for IT through, for example, shared facilities (i.e. hardware) and/ or applications (Müdespacher 1990: 115).

Moreover, Morgan (1992: 317) argues that „at the city and regional level, the technical possibilities will count for nought unless they are integrated into a regional innovation strategy which is attuned to local circumstance and alive to the social and organisational structure through which technology is deployed“.

In sum, the need for local players to become part of an IT network largely depends on the geographical area, its location and function, in which those actors operate (Gräf 1994: 305). However, well-informed local authorities can generally be one of „the variable conditions favouring .. [economic] growth“ (Dunford 1989: 20) despite of the just described obstacles to IT. The use of telecommunication facilities are likely to encourage long-term rural development as a result of a number of benefits, of which the most significant ones can be identified as:

1. „overcoming the traditional barriers of time and distance, thus ... increasing the competitiveness of rural firms
2. ... increasing locational flexibility [in terms of costs]
3. simplifying and improving the efficiency and effectiveness of any internal business and management functions
4. increasing co-operation with other rural firms by encouraging a networking culture
5. bringing rural firms „nearer“ to the major decision-makers located in core areas“  
(Ilbery et al. 1995: 58)

This means that IT does have the potential to deliver certain competitive advantages for rural areas. The successful use of this potential, however, is dependent upon a series of factors as will be demonstrated in the subsequent presentation of the empirical study.



## II Empirical study

The lack of information on the actual availability and use of IT by administrative bodies required to acquire data on this issue. The findings presented in this paper are based on research, which was mainly undertaken in 1996 and 1997. The research included both quantitative and qualitative elements: Quantitative through questionnaires, which encompassed a much wider range of issues than merely IT. In fact, this survey was a comprehensive and holistic study on the EU Initiative LEADER carried out in January 1997. It explored the activities of the LEADER beneficiaries such as local economic development agencies and local authorities (the so-called LEADER Action Groups (LAGs)). However, as the survey was mostly concerned with bottom-up planning strategies and transnational co-operation, the information related to the issue of IT is restricted to one single criterion: the degree to which the LAGs are informed and wish to be informed by the A.E.I.D.L.. Qualitative in so far as I interviewed some LAGs' managers. In addition, a database of all LAGs, published by the European Observatory of the LEADER Initiative (A.E.I.D.L.) in 1997, served as a source for gaining information on the availability of the Internet and Email systems. Both the theoretical background and the empirical approaches underline the current developments within the EU as to

1. the still increasing importance of the supra-national level, namely the European Commission, who enacts regulations, guidelines, etc., which are exclusively available through the digital highway;
2. the EU providing financial support for various regional and local initiatives as the European Commission's policy „is intended to stimulate the provision and growth of .. [IT] infrastructure and operational facilities“ through programmes and funding schemes (Reekie 1995: 34);
3. the EU's obligation to provide information on most European matters to anyone, particularly to actors involved in European issues such as the LAGs;
4. the local, regional and national levels depend on information on and by the supra-national authority in order to being able to implement their policies.

As a consequence, this paper focuses on the „dissemination of information“ as the key issue in IT. In the process of analysing the acquired data and information, several aims of this study shall be kept in mind, which will be briefly outlined now.

## 1 Aims of the study

The prior objectives of the research for this paper were to

- acquire information on the distribution of IT facilities available in local administrations;
- identify factors which are favourable to the availability and use of IT in such institutions;
- discuss the necessity and benefits of IT for those actors and their (rural) environment.

Further aims included, for example, the exploration of

- the extent to which the LAGs are informed on European affairs being of relevance and importance to their day-to-day work;
- the LAGs' opinions on the usefulness, necessity and actual use of IT.

## 2 Results of this study

The results of the research shall be presented in the following order:

1. Presentation of the distribution of IT, namely the availability of email addresses and access to the Internet;
2. Analysis of the survey's sample;
3. Description of the degree of information;
4. Interpretation of the correlation between the level of information and selected factors (eg. the LAGs' legal status);
5. Presentation of the additional information which was gained through expert interviews.

### 2.1 Availability of IT

As regards to the LAGs' availability of email systems and their access to the Internet, significant differences between the EU Member States can be noticed (*see figure 2 below*).

**Figure 2: LAGs and their access to an email system**

<b>Country</b>	<b>Approved LAGs (<i>by 1998</i>)</b>	<b>Email</b>	<b>%</b>
<b>Austria</b>	40	12	<b>30</b>
<b>Belgium</b>	---	---	---
<b>Denmark</b>	12	4	<b>33</b>
<b>Finland</b>	22	19	<b>86</b>
<b>France</b>	133	8	<b>6</b>
<b>Germany</b>	139	30	<b>22</b>
<b>Greece</b>	41	5	<b>12</b>
<b>Ireland</b>	36	9	<b>25</b>
<b>Italy</b>	126	10	<b>8</b>
<b>Luxembourg</b>	2	2	<b>100</b>
<b>The Netherlands</b>	4	2	<b>50</b>
<b>Portugal</b>	47	5	<b>11</b>
<b>Spain</b>	125	36	<b>29</b>
<b>Sweden</b>	12	11	<b>92</b>
<b>England</b>	22	8	<b>36</b>
<b>Northern Ireland</b>	24	1	<b>4</b>
<b>Scotland</b>	15	15	<b>100</b>
<b>Wales</b>	8	3	<b>38</b>
<b>Total</b>	<b>808</b>	<b>180</b>	

Source: A.E.I.D.L. (1997).

Although one must be aware that A.E.I.D.L.'s database cannot claim to be complete, and its data is likely to have changed since its publication a general picture can be drawn up. Europe's northern countries tend to be better equipped than the EU Member States in the south. In particular, the Mediterranean countries show a comparatively little dense network of IT facilities, France and Italy hosting the largest number of LAGs (relative to their approved LAGs) not being linked to the Internet. In the opposite, the Scandinavian LAGs, notably in Sweden and Finland, are more frequently equipped with IT. Considering the number of email addresses in the U.K., one can identify a north-south divide with North and Central EU Member States being technologically more advanced – in terms of possessing computing equipment - than their counterparts in the south.

The availability and distribution of IT facilities, however, does not necessarily imply how efficient and to what extent such equipment is used by the local actors. Consequently, the LAGs' level of information was to be explored as it can be considered to be an indicator and factor for the use of IT.

## 2.2 The sample of the survey

At the stage of carrying out the survey, more than 500 LAGs had been approved<sup>10</sup>. The following figure 3 shows the number of allegedly approved LAGs and the number of responses by country. 206 LAGs completed and returned the questionnaire until mid-1997. We must take into consideration that some of those addressed groups did either not exist or benefit from the LEADER scheme, and other LAGs might not have been known of and therefore not been approached. Nevertheless, the number of completed questionnaires in relation to the approximate total number of LAGs in each EU Member State turned out to be equally distributed. The specific response rate of each country facilitated the analysis in so far as it improved the degree to which this study can claim to be representative.

**Figure 3: LEADER Action Groups in all EU Member States by January 1997**

Country	Approved LAGs	Responses	% of LAGs	% of responses
<b>Austria</b>	36	12	33	6
<b>Belgium</b>	3	3	100	2
<b>Denmark</b>	10	6	60	3
<b>Finland</b>	22	9	41	4
<b>France</b>	39	20	51	10
<b>Germany</b>	115	60	52	29
<b>Greece</b>	35	13	37	6
<b>Ireland</b>	32	15	47	7
<b>Italy (Abruzzo)</b>	17	1	6	1
<b>Luxembourg</b>	2	2	100	1
<b>The Netherlands</b>	4	2	50	1
<b>Portugal</b>	44	26	59	13
<b>Spain</b>	90	17	19	8
<b>Sweden</b>	12	5	42	2
<b>England</b>	8	2	25	1
<b>Northern Ireland</b>	12	3	25	2
<b>Scotland</b>	14	7	50	3
<b>Wales</b>	7	3	43	2
<b>Total</b>	<b>502</b>	<b>206</b>	<b>41 (average)</b>	<b>100</b>

Source: Own enquiries.

Nearly 30%, or 60 of all received questionnaires came from Germany. Considering that about 115 LAGs already operated in Germany at the time of the survey, this large number is not all surprising. Other countries from which equally large proportions of questionnaires (in relation to the total number) were received include France (10%), and Portugal (26%).

### 2.3 Analysis of the level of information in comparison to other aspects

The analysis of the obtained data will only refer to the LAGs who returned their completed questionnaires. The local actors were – amongst others - asked

- ,how much control they do have over the spending of their LEADER budget‘;
- ,how much independence they do have from have other institutions in their project decisions, day-to-day work, etc.‘;
- ,how well informed they have been by the A.E.I.D.L. on transnational and other activities‘.

The given answers undoubtedly depended very much on the individuals estimation of their own LAGs‘ situation. It is certainly difficult, if not impossible to define ,complete independence‘. Members of one LAG might consider their work to be completely independent as long as they are not aware of other, more independent work methods. Despite of these constraints, a general insight into the LAGs‘ *modi operandi* can be gained. Figure 4 below illustrates the LAGs‘ opinions on those issues.

**Figure 4: Financial flexibility, operational independence and EU-information**

Financial flexibility		Decision-making processes and daily work		Information by the A.E.I.D.L.	
	%		%		%
no control	5	no independence	5	not informed at all	8
little control	8	little independence	9	little informed	24
average control	23	average independence	35	average informed	28
much control	23	much independence	30	well informed	24
complete control	40	complete independence	21	very well informed	16
yet unknown	2				
	101		100		100

Source: Own enquiries.

In comparison to the issues of „financial flexibility“ and „decision-making processes“, the level of information on transnational and other activities by the A.E.I.D.L. is relatively small. Yet, 8% had not received any information, and more than one half of the LAGs consider themselves to be either ,little‘ (24%) or ,average‘ (28%) informed. In comparison to the financial and operational issues, only a small percentage (16%) thought to be ,very well informed‘.

In sum, the LAGs appear to be more satisfied with their competences concerning financial and operational affairs than with the A.E.I.D.L. in carrying out its task as the LEADER Coordinating Unit and European Observatory, which predominantly includes the provision of information as well as consultancy.

In addition to the LAGs' opinion on their current situation, I believed that it was crucial to explore whether those particular issues are considered to be important for the convenience, success and the implementation of local projects. Figure 5 below shows the ranking of those aspects provided by the LAGs.

**Figure 5: Estimation of the importance of some factors for the LAGs' tasks**

	<b>not important at all</b>	<b>not very important</b>	<b>average</b>	<b>important</b>	<b>very important</b>
Financial flexibility	---	2	6	29	<b>64</b>
Administrative and operational in-dependence from other institutions	0.5	5	14	33	<b>47.5</b>
Experiences in dealing with EU funding	0.5	3	12	36	<b>48.5</b>
Information by the A.E.I.D.L.	0.5	11	24.5	<b>40</b>	<b>24</b>

Source: Own enquiries.

Two thirds of all LAGs consider financial flexibility to be the most crucial factor for the success of their work (but only 40% thought to have 'complete control' on their budgets). Independence from other institutions and experiences with EU funding are equally important to them; almost half of the LAGs in each case rank them as 'very important'. Only half as many (24%) believe it to be necessary to be informed by the A.E.I.D.L.. However, an impressive 40% stress the importance of such information to them. In contrast, for example a quarter of the LAGs had been 'little informed' as demonstrated above. Consequently, one can conclude that the LAGs' lived reality (or the actual implementation) is not coherent with their actual desires and needs. However, this may be the case for LAGs in some EU Member States but less so in others. The following crosstabulation illustrates the correlation of the LAGs in each EU Member State with the level of information (*see figure 6*).

**Figure 6: LAGs' level of information in all EU Member States**

Country	no. of valid cases (=100%)	not informed at all (in %)	little informed (in %)	average informed (in %)	well informed (in %)	very well informed (in %)
<b>Austria</b>	11	---	18	46	36	---
<b>Belgium</b>	2	---	---	50	50	---
<b>Denmark</b>	6	---	33	33	---	34
<b>Finland</b>	9	---	23	33	33	11
<b>France</b>	18	17	28	22	22	11
<b>Germany</b>	59	9	30	29	22	10
<b>Greece</b>	13	8	15	23	15	39
<b>Ireland</b>	15	13	13	27	34	13
<b>Italy (Abruzzo)</b>	1	100	---	---	---	---
<b>Luxembourg</b>	2	---	---	---	50	50
<b>The Netherlands</b>	2	---	---	---	50	50
<b>Portugal</b>	26	---	15	27	23	35
<b>Spain</b>	17	6	29	29	24	12
<b>Sweden</b>	5	20	20	20	40	---
<b>England</b>	2	---	50	50	---	---
<b>Northern Ireland</b>	3	34	---	33	---	33
<b>Scotland</b>	7	---	57	29	14	---
<b>Wales</b>	3	---	---	34	33	33
<b>Total</b>	<b>201</b>					

Source: Own enquiries.

Although it is unknown whether those LAGs claiming to be ,well' or even ,very well informed' actually possess and/or have access to IT facilities, the above figure 6 illustrates that LAGs in EU Member States hosting many with IT equipped LAGs (*see figure 2*) tend to be better informed. For example, none of the LAGs in Finland, Scotland, Luxembourg or the Netherlands answered ,not be informed at all' as opposed to France with a low rate of Internet links. In almost one half of the returned questionnaires from France the categories ,not informed at all' or ,little informed' were ticked. Undoubtedly, this is only an assumption (LAGs in Sweden representing the contrary) and cannot be statistically proved due to insufficient data.

## 2.4 The correlation between the level of information and selected *factors*

The LAGs' *legal status* is rather important in so far as to being able to judge whether, for example, private organizations are better equipped with IT than public administrations. The latter are often said not to provide a friendly environment for investments such as for IT. The legal status of the LAGs ranges from being one part of a local authority or other public administration, a purely private nature, various forms of partnerships, voluntary organisations, etc.. Some forms, such as private, public and voluntary organizations, are represented by a similar number of responses with about 25% each. This means that voluntary organisations are about as frequent as public administrations and privately run /owned LAGs. Less common forms include all kinds of partnerships (eg. public-private represented by 10%) as well as local group without any legal status (2%). Figure 7 illustrates the correlation of the legal status as the independent variable and the level of information, whereby only private, public and voluntary organizations as the most common form were considered.

**Figure 7: LAGs' legal status and their level of information**

<b>Legal status</b>	<b>no. of valid cases (=100%)</b>	<b>not informed at all (in %)</b>	<b>little informed (in %)</b>	<b>average informed (in %)</b>	<b>well informed (in %)</b>	<b>very well informed (in %)</b>
<b>private</b>	49	10	14	29	29	18
<b>public</b>	54	7	20	35	26	11
<b>voluntary</b>	40	3	30	32	18	17

Source: Own enquiries.

Once more, it is not clear whether well or very well informed organizations – independent of their legal status – have access to email and the Internet. I consider the slight difference between private and public LAGs as regards to their level of information to be too marginal and, therefore, insignificant (eg. 18% of private versus 11% of public organizations being ,very well informed'). Reasons causing this difference may be the LAGs' subjective estimation, the fact that slightly more ,very well informed' private administrations returned the questionnaire, etc.. Nevertheless, one must assume that voluntary LAGs, who are more often ,little informed' than others (30%), might have less financial resources available than privately owned organizations. The latter certainly operate on a much more economically oriented basis, trying to make profit.



As regards to the LAGs' *workforce* the survey showed that about three quarters of the responding LAGs employ up to three people on a full-time and/or up to two on a part-time basis. A considerable 5%, in both cases, work on a voluntary or honorary basis. It is also important to stress that although the LAGs' management boards may only consist of a fairly small number of employees, an individual LAG may well involve numerous actors from other organizations. For the correlation between the LAGs' workforce and the level of information only the number of employees on a full-time basis were taken into consideration.

**Figure 8: LAGs' workforce (full-time) and their level of information**

<b>Number of employees</b>	<b>no. of valid cases (=100%)</b>	<b>not informed at all (in %)</b>	<b>little informed (in %)</b>	<b>average informed (in %)</b>	<b>well informed (in %)</b>	<b>very well informed (in %)</b>
<b>0</b>	56	14	25	25	20	16
<b>1</b>	40	8	17	43	20	12
<b>2</b>	24	8	34	25	25	8
<b>3</b>	19	---	37	11	26	26
<b>4</b>	8	---	12	63	25	---
<b>5</b>	11	9	9	18	46	18
<b>6</b>	5	---	20	20	40	20
<b>7 or more</b>	8	12	25	13	12	38
<b>honorary (= unpaid)</b>	9	---	33	11	23	33
<b>Total</b>	<b>180</b>					

Source: Own enquiries.

The degree to which LAGs are informed seems to increase with the number of employees. This means, more LAGs with only one or two employees are 'not at all' or 'little informed' (eg. about one third of the LAGs with two employees answered to be 'little informed'), whereas one half of the LAGs employing seven or more people are either 'well informed' (12%) or 'very well informed'. Assuming that smaller organizations - in terms of their number of employees - have a smaller budget and are able to invest less than others, the above finding (few employees equal little information) may well be a result of inadequate IT. Once more, it must be pointed out that it is unknown whether those organizations with up to two employees do not have access to the Internet as a source for information on European affairs.

Overall, I strongly believe that the level of information is dependent on some factors as a result of the data presented above, some expert interviews which I carried out in Germany (D) and Wales (UK) from 1996 to 1998, as well as common sense.

### 3 Results of the expert interviews

The assumption and/or hypothesis that local actors with access to the Internet and email are better informed than others was confirmed through several expert interviews with LAGs and their managers. In this paper, only some of the LAGs' managers opinion on their use of the Internet (including email) shall be briefly presented. It could generally be noticed that the longer the LAGs had been linked to the Internet the better informed they were on current European affairs such as the launch of new programmes, recent regulations and guidelines, seminars and conferences to be held in the near future, etc.. One positive example is the LAG Höxter (D; public-private / 5 employees), who appeared to be aware of the most recent developments, eg. new EU funding schemes, which could be found on the Internet but had not been distributed in hard copy version. According to their manager, this LAG regularly obtains information through the Internet and frequently uses email for communicating with the A.E.I.D.L and other LAGs in order to save time and reduce costs, and to be able to receive information by the A.E.I.D.L. much more quickly. Further positive examples are the LAGs Menter Powys (UK; public / 7 employees) and Projektgesellschaft Westküste (D; public / 2 employees), who have been mostly using their IT facilities for correspondence. Both groups rely on the email to maintain and improve their international contacts. This is particularly important for the Projektgesellschaft Westküste with its strong links to Scandinavian LAGs. There (as the large proportion of Scandinavian LAGs using IT indicated), IT is an important factor for the LAGs' day-to-day operations.

In contrast, one LAG (Soltau-Fallingbostel, D; public / 1 employee) considered the Internet not to be the adequate means to market their local tourism industry because of this particular region's focus on elderly clientele which is less likely to use the Internet than younger visitors. Although the region of Kusel (D) faces similar difficulties, the LAG Kusel believes that - in the long-term - IT will become more and more important as a tool for marketing. Therefore, Kusel decided to acquire further knowledge on new IT, become more familiar with such resources now, and not to miss out on possible benefits. As a result, the LAG Kusel has been offering their tourism product on the Internet for some years now, and claim to having attracted some visitors this way. These contrasting opinions on the benefits of the use of IT show that there is a need to inform local authorities and other actors of advantages and disadvantages of advanced computing technologies, its increasing importance, etc..

### III Conclusions

The examination of the distribution and application of IT facilities showed immense differences between the EU Member States as well as between individual LAGs across Europe. Not only the number of LAGs using IT in their day-to-day work differs significantly between the EU Member States but, more importantly, their openness and attitude towards the need and use of such facilities varies enormously. Some of the local actors have realized that their work can benefit from applying IT, and may be crucial in the future for a number of reasons: For example, „the European Commission is responsible both for stimulating the development of interactive electronic information services in Europe and for providing public online databases of information on the Union’s activities“ (Reekie 1995: 33). This means if LAGs were to benefit from such information in the most time-efficient way they would certainly need adequate IT. Another reason was identified in the quantitative analysis of the returned questionnaires which also showed that the programme areas’ local economies are characterized by:

- relatively high numbers of employees in agriculture/forestry;
- relatively few employees in manufacturing;
- high dependence on the service sector;

This means that the importance of services with a generally high demand for IT already implies the need and use of IT by the LAGs. Otherwise the lack of appropriate facilities may well result in obstacles to successful local (economic) development in the long-term. However, one must be aware that it is unlikely that the rural areas’ previous disadvantages would become meaningless as a result of the use of IT as there are certainly many more factors which are as crucial for their future development.

Finally, it must be stressed that sufficient demand for telecommunication facilities needs to be generated. For this reason, the here presented paper was aimed to stimulate further research on the use of IT in order to make local authorities and other local actors aware of the existing deficiencies. In other words, there is still a need to undertake studies which exclusively investigate the availability and use of advanced computing equipment and related issues.

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- <sup>1</sup> Müdspacher (1990: 115) believes that distances for transport are not only shortened through the use of IT but even become completely obsolete; at least as far as the transport of information is concerned.
- <sup>2</sup> Schütte goes as far as to claim that „locational disadvantages potentially cease to exist“ as a result of telematics (1990: 309).
- <sup>3</sup> For example, see Gräf (1994: 304).
- <sup>4</sup> However, Arnbak (1990: 13) also identifies „funding problems associated with the telecommunications sector ... [which] lead to considerations of how to operate such public facilities in the most cost-effective manner“.
- <sup>5</sup> See also Roome/Whitton (1987: 63); Ilbery et al. (1995: 55); Irmen (1992: 161).
- <sup>6</sup> Ilbery et al. (1995: 56) are only one of the many examples for focusing on business. They state that „the aim [of the promotion of telematics by the European Commission] is to use telematics to offset the size and locational disadvantages of SMEs in rural areas and, by raising levels of business activity and profitability, to secure diversified and sustainable rural development“
- <sup>7</sup> Arnbak (1990: 11) warns that „successful introduction of telematic applications should not be seen as a merely technical challenge“.
- <sup>8</sup> Schütte (1990: 325) stresses the two factors information and qualification which are, in her opinion, „the basis for the application of telematics“.
- <sup>9</sup> A study on this issue was carried out by Gräf (1994: 304ff.).
- <sup>10</sup> Since obtaining the data on the LAG, addresses might of have changed, new LAGs have been approved, others stopped operating and/or other changes have obviously occurred as could already be gathered from figures 2 and 3.

## References

- A.E.I.D.L. (1997). *List of the LEADER II Beneficiaries (as of 01/10/1997)*. Brussels.
- Arnbak, J.C. (1990). 'Telematics - Aims and Characteristics of a New Technology'. In Soekkha, Hans M. et als. (Eds.), *Telematics - Transportation and Spatial Development*. Proceedings of an International Symposium organized under the auspices of the Centre for Transportation Engineering, Delft University of Technology, held in The Netherlands Congress Centre, The Hague, The Netherlands, April 14-15, 1988. VSP: Zeist, NL, 11-20.
- Capello, R. (1994). 'Towards New Industrial and Spatial Systmes: The Role of New Technologies'. *Papers in Regional Science*, 73 (2), 189-208.
- Dunford. M. (1989). 'State-Industry Relations, Inter-firm relations and Regional Development'. *Geography*, 74 (1), 20-28.
- Gräf, P. (1994). 'Telekommunikation im europäischen Binnenmarkt'. *Geographische Rundschau*, 46, (5), 304-310.
- Ilbery, B.; Clark, D.; Berkeley, N. and I. Goldman (1995). 'Telematics and Rural Development: Evidence from a Survey of Small Businesses in the European Union'. *European Urban & Regional Studies*, 2 (1), 55-68.
- Irmen, E. (1992). 'Regionale Infrastrukturausstattung'. *Geographische Rundschau*, 44 (3), 160-166.
- Morgan, K. (1992). 'Digital Highways: the New Telecommunications Era'. *Geoforum*, 23 (3), 317-332.
- Müdespacher, A. (1990). 'Telematik: eine Gefahr für die Wirtschaft peripherer Räume?'. *Geographica Helvetica*, 45 (3), 113-121.
- Reekie, A. F. (1995). 'The European Commission's Online Public Databases'. *Journal of Government Information*, 22 (1), 33-43.

Roome, N. J. and M. H. Whitton (1987). 'The Contribution of Computer-based Information Systems to Partnership Between Public Agencies and Voluntary Environmental Groups'. *Planning Outlook*, 30 (2), 63-66.

Schütte, G. (1990). 'Telematics and Spatial Planning, Recent Developments in West Germany'. In Soekkha, Hans M. et als. (Eds.), *Telematics - Transportation and Spatial Development*. Proceedings of an International Symposium organized under the auspices of the Centre for Transportation Engineering, Delft University of Technology, held in The Netherlands Congress Centre, The Hague, The Netherlands, April 14-15, 1988. VSP: Zeist, NL, 309-327.

Soekkha, H. M. (1990). 'Telematics in Industry and Society: Applications and Future Impacts. Preview and Evaluating Remarks'. In Soekkha, Hans M. et als. (Eds.), *Telematics - Transportation and Spatial Development*. Proceedings of an International Symposium organized under the auspices of the Centre for Transportation Engineering, Delft University of Technology, held in The Netherlands Congress Centre, The Hague, The Netherlands, April 14-15, 1988. VSP: Zeist, NL, 3-7.