

Development of optical frequency comb generator based on a WGMR and its applications in telecommunications

CONSENSUS EVALUATION REPORT (extract)

1. QUALITY OF THE RESEARCH		
<p>-Whether the aim of the project and research results to be attained at the end of the project have been fully achieved</p> <p>-Whether the applied research methodology has been appropriate</p> <p>-Whether the research category during the whole period of project implementation has complied with the initially planned</p> <p>-Whether the achieved research results are clear and evident, their scientific quality is suitable (including the prototype developed & the information published in scientific articles)</p>	Expert valuation	Respective score
	Corresponds	90%
	Partly corresponds	
	Disagrees	
<p>The project was focused toward a multi-faceted and ambitious goal: the development, construction and characterisation of a microresonator for different applications in telecommunications. Since the very beginning it has clearly stated its objectives and goals and during its implementation it has followed a clear route to achieve the goals as stated. The activity performed includes testing of commercial devices, as well as modelling, design fabrication and testing of novel prototypes of the microresonator.</p> <p>The research methodology applied has been rigorous and efficiently managed to obtain the final goal. The research activities have included both theoretical and experimental efforts developed with a rigorous scientific method working also in collaboration with eminent foreign research institutes. The project has obtained clear and evident results whose scientific value is clearly assessed also by the number of scientific papers published after peer review on the activity performed in this project. The project team has successfully reached a TRL5 (from TRL2 as starting point).</p> <p>The reports and the documents attached show the achievements of most of project activities - they are well written, clear, exhaustive and present the results achieved with adequate level of detail to allow a proper evaluation. The majority of workpackages have been performed efficiently and even beyond goals as stated.</p> <p>Dissemination has been performed very well with a high number of publications (in highly ranked journals).</p>		
2. ECONOMIC AND SOCIAL IMPACT OF THE RESEARCH		
<p>- The social and economic impact of the achieved results on the implementation of the national economy's transformation strategy, priorities and smart specialisation</p> <p>-Compliance of distribution of planned research results and transferring measures</p> <p>-Sustainability of the research results: whether the results comply with demand in the sector & whether the results can be commercialised</p> <p>-Whether the project activities have contributed and will contribute to the promotion of long-term cooperation with collaboration partners</p>	Expert valuation	Respective score
	Corresponds	90%
	Partly corresponds	
	Disagrees	
<p>The project addresses a problem of strong public need: the demand for high quality, reliable, and secure telecommunication, involving the transmission of spoken words, video signals and data. It has positively contributed to the economic impact. The prototype realised has significant potential for a future development to a market level maturity. Distribution and dissemination of project results has been performed in accordance (in some cases outperforming) with the initial plans.</p> <p>The project team has presented plans toward a further development of the prototype toward market level TRL. However, regarding the prototype and the new product to be patented, optical-frequency combs in monolithic WGM microresonators have already been demonstrated, which may diminish the potential impact of the designed prototype.</p> <p>The project team has developed significant collaborations both within Latvia and abroad.</p>		
3. IMPLEMENTATION QUALITY AND EFFICIENCY		
<p>-Efficiency of the use of material and financial resources, namely, compliance of the allocation of resources (financial resources, research infrastructure: materials and equipment) with the achieved research results</p> <p>-Compliance of the implemented research activities with the planned time schedule</p>	Expert valuation	Respective score
	Corresponds	100%
	Partly corresponds	
	Disagrees	
<p>The resources have been used in an appropriate manner. A wise and accurate planning, distribution and management of financial resources has been done throughout the whole project.</p> <p>The overall time schedule has been changed mainly for reason related to the pandemic, but on overall the project team has been in full control of the activities running and of time schedule. The Emergency Health situation was not helping in certain activities, but from the midterm to the final report, there has been an increment of both, in a way that the team overreached the proposed research products</p>		

Overall Evaluation of the Level of Achievement of the Project Aim and the Planned Results

Type of evaluation	Respective evaluation	Total performance percent's
Corresponds	X	95%
Partly corresponds		
Disagrees		