

SUBMISSION FORM

University System/Employee Intellectual Property Joint Participation
MUSP 407

This form is to be submitted with any Board of Regents item whereby a campus seeks the approval of an agreement with or arrangement regarding an employee pursuant to 20-25-109 MCA and Regents Policy 407.

When the submission concerns matters of trade secrets or confidential business information, or any other matter entitled to privacy under state or federal law (e.g., the federal statute known as Bayh/Dole) the submitting campus may request consideration of the submission, in whole or in part, in executive session.

The submitting campus should also provide the Commissioner a copy of the contract(s) that form the basis for the cooperative arrangement for which approval is sought. Submission of the contract does not indicate a conclusion that all or part of the contract is a public document and the question of whether it is in whole or in part protected from public disclosure will be evaluated on a case by case basis.

1. Summarize the nature of the intellectual property that was developed by the employee seeking approval. Indicate the sources of funding for the research that resulted in this invention.

Dr. John Morrison, along with four other inventors from the Idaho National Laboratory and QualTech Incorporated, has developed and patented a series of technologies which allow for the real time determination of the state of charge of a battery. The major applications include electric and hybrid vehicles, remote battery installations including extraterrestrial missions. This work has led to eight patent disclosures, 5 patents pending and two patents granted.

Dr. Matt Donnelly has not participated in the development of this IP but will serve as the President of Battery Impedance Incorporated.

This work was supported by grants from US DOE NASA and the Idaho National Laboratory.

2. a. Name(s) of the university employee(s) involved.

Dr. John Morrison and Dr. Matt Donnelly

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- b. Name(s) of business entity (ies) involved.

Battery Impedance Incorporated has been formed in Butte, by Dr. Morrison.

3. The university and employees are seeking approval for (check as many as appropriate):

- a. The employees to be awarded equity interest in the business entity.
 - b. The employees to serve as a president of the board of directors or other governing authority of the business entity.
 - c. The employees to accept employment from the business entity.
4. How will approval of this relationship contribute to the objectives of the university's technology transfer and intellectual property development programs?

The benefits to Montana Tech and the U of M and the State of Montana arising from current and proposed research activities are:

- As electric powered vehicles enter the national fleet in increasing numbers the need for a reliable method of determining the stored energy in a battery system needs to be solved. The work of Dr. Morrison and his colleagues addresses this need and represents an excellent technology transfer opportunity.
- Montana Tech and the other members of the consortium have developed and patented a series of inventions and continue to refine this technology. Their efforts earned an IR 100 award in 2010. This success has given both Montana Tech and Montana some very positive press over the last several years.
- The primary goal of the development of the battery monitor technology is to transfer it to the commercial sector. The Battelle Energy Alliance, Inc, the operating contractor of the Idaho National Laboratory, is finalizing a four party agreement and will begin aggressive marketing of this technology to the private sector. Potential customers include the auto industry, the electric power industry and NASA. If successful, this will bring additional research support to Montana Tech and potential industrial support to Battery Impedance Incorporated.
- This collaboration with our nearest National Laboratory partner will serve as a model to develop further collaborative research and technology transfer agendas which will serve both Montana Tech and the region.

By approving this University-private sector relationship, the intellectual property established and developed by the University faculty, and their collaborators, will be made available to the private sector through a series of licensing agreements, with corresponding returns to Montana Tech.