

PROMISING PARTNERSHIP: GROUPE SYSTÈME FORÊT (GSF)

Good forest inventory tools make for informed decision making!

T here is no doubt that at some point into the near future, the need to go to the forest and physically measure some trees to understand tree and stand attributes will be greatly diminished. But today the production of precise information from remote sensing is still emerging and requires substantial R&D. A partner of our institute often says, 'Remote sensing has for the past decades consistently over promised and under delivered...'. There is certainly some truth to that statement.

While we are learning the merits and usefulness of technology such as LiDAR, machine and deep learning, artificial intelligence, modern high-resolution imagery and unmanned aerial systems carrying state-of-the art sensors, the NHRI is convinced we need solid processes to adequately acquire cruise data in the most efficient way. That is why NHRI has established a partnership with Groupe Forêt (GSF) to improve their applications and adapt them to our needs and the needs of our clients.

Groupe Système Forêt (GSF) is a team of multi-disciplinary professionals working mainly in the development of geomatic solutions for the forest industry.

GSF provides tools to efficiently plan, monitor and exploit the forest with top of the line products like GSFNav Windows for forestry machinery and GSFNav Android for field surveys, and ArcMap extensions like GSFOutil, GSFSondage and GSFDebit for forestry planning and monitoring in the office. GSF is also involved in training, custom software development, satellite imagery and GPS sales and consulting.

Myriam Cyr Photography





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GSF's mission is to simplify geomatic and surveying for forestry people, and to promote customer knowledge and development through training and ongoing support. Forestry solutions are developed on the Windows platforms using ESRI products (ArcGIS Desktop, ArcGIS Pro, etc.). Business partner of ESRI Canada Limited since 1995, GSF remains to this day a strong retailer in Canada of ESRI Canada Desktop solutions and its extensions such as Spatial Analyst and 3D Analyst. Well established in the eastern North America (Quebec, Ontario and the Maritimes), GSF works in several sectors such as forestry, mining, environmental and municipal.

NHRI's experience shows that traditional field inventory is still the most reliable source of information necessary to assign harvest-based silviculture activities for a particular location in mixed and hardwood stands.

Predictions of tree and stand attributes derived by remote sensing applications such as LiDAR and multispectral imagery, while the way of the future, have not reached the level of maturity that is required at this point. Their current use today remains that of planning at the tactical scale and certainly augment knowledge that is out there.





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Until recently, no efficient software solution permitted data gathering and compilation in the field to assign a prescription from the NHRI Silviculture Prescription System (SPS 2.0).

For this reason, NHRI contacted GSF, a well-known subject matter expert, to adapt their existing software, GSF-Sondage, to the particularities of the New Brunswick forest sector. Because GSF-Sondage was developed for the Quebec forestry environment, modifications needed to be made mostly in the vocabulary, terminology, types of data collected, and generated outputs. Therefore, GSF and NHRI collaborated on the development of GSF-Sondage «NB version» over the winter and spring of 2020.

NHRI first transmitted the obvious elements that should be created or modified, then the GSF team realized those modifications. Afterwards, the «beta» version was tested and only a few minor adjustments where necessary to produce the final version of the application. This version allows capture, transfer, and compilation of all inventory data as well as the production of a report used in granting an SPS 2.0 prescription.











Institut de recherche sur les feuillus nordiques Inc. Northern Hardwoods Research Institute Inc.

ADDRESS

165, BOULEVARD HÉBERT EDMUNDSTON, N.-B. E3V 2S8

PHONE

1 506 737-4736

FAX

1 506 737-5373

E-MAIL

INFO@HARDWOODSNB.CA

WEB

WWW.HARDWOODSNB.CA







