

Geospatial Measuring Equipment: Leasing *Functional Models*?

Federal Geodetic Control Subcommittee
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Geospatial Measuring Equipment: Leasing *Functional Models*?

Presentation Outline:

- WHO
- WHAT
- WHY
- WHEN
- WHERE
- HOW
- DISCUSSION



WHO

I am not?

- An expert in FAR, Attorney, Accountant, Contracting Officer, (etc).

I am?

- Federal Land Surveyor.

Could be impacted?

- Ideally, all Federal geospatial measuring equipment users (positively?).



WHAT

- Functional model: (4-5)
 - How we conduct ourselves, generally.
- Geospatial Measuring Equipment:
 - Physical devices and technologies used to accomplish our official duties.



**(1) Purchase of GNSS system every 6 years keeping updated****1 GNSS system**

Purchase Cost: \$67,000.00
 Software Update Cost: \$850.00*6=\$5,100.00
 Total Cost: \$72,100.00
 Cost Per Year: **\$12,016.67**

10 GNSS systems

Purchase Cost: \$670,000.00
 Software Update Cost: \$8,500.00*6=\$51,000.00
 Total Cost: \$721,000.00
 Cost Per Year: **\$120,166.67**

(-15% \$102,141.67)**100 GNSS systems**

Purchase Cost: \$6,700,000.00
 Software Update Cost: \$85,000.00*6=\$510,000.00
 Total Cost: \$7,210,000.00
 Cost Per Year: **\$1,201,666.67**

(-15% \$1,021,416.67)

The next few graphics are intended to generally represent one multi-constellation / frequency GNSS system comprised of four devices:

WHAT

WHAT

<p>(2) Purchase of GNSS system every 8 years 4 year software/firmware reinstatement</p>	<p>(3) Purchase of GNSS system every 4 years</p>
<p style="text-align: center;"><u>1 GNSS system</u></p> <p>Purchase Cost: \$67,000.00 Software Reinstatement Cost: \$880.00 Total Cost: \$67,880.00 Cost Per Year: \$8,485.00</p>	<p style="text-align: center;"><u>1 GNSS system</u></p> <p>Purchase Cost: \$67,000.00 Cost Per Year: \$16,750.00</p> <p>(4) If every 6 years: \$11,166.67</p>
<p style="text-align: center;"><u>10 GNSS systems</u></p> <p>Purchase Cost: \$670,000.00 Software Reinstatement Cost: \$8,800.00 Total Cost: \$678,800.00 Cost Per Year: \$84,850.00</p> <p style="text-align: center;">(-15% \$72,122.50)</p>	<p style="text-align: center;"><u>10 GNSS systems</u></p> <p>Purchase Cost: \$670,000.00 Cost Per Year: \$160,750.00</p> <p style="text-align: center;">(-15% \$136,637.50)</p> <p>(4) If every 6 years: \$111,666.70 (-15% \$94,916.70)</p>
<p style="text-align: center;"><u>100 GNSS systems</u></p> <p>Purchase Cost: \$6,700,000.00 Software Reinstatement Cost: \$88,000.00 Total Cost: \$6,788,000.00 Cost Per Year: \$848,500.00</p> <p style="text-align: center;">(-15% \$721,225.00)</p>	<p style="text-align: center;"><u>100 GNSS systems</u></p> <p>Purchase Cost: \$6,700,000.00 Cost Per Year: \$1,600,750.00</p> <p>(4) If every 6 years: \$1,116,667.00 (-15% \$949,166.95)</p>



WHAT

(5) Lease of GNSS system all included		
<u>1 GNSS system</u>	<u>10 GNSS systems</u>	<u>100 GNSS systems</u>
<u>6 Year option:</u>	<u>6 Year option:</u>	<u>6 Year option:</u>
Total Lease Cost: \$101,678.42	Total Lease Cost:\$864,266.59	Total Lease Cost:\$8,134,273.76
Cost Per Year: \$16,946.40	Cost Per Year: \$144,044.43	Cost Per Year: \$1,355,712.29
<u>5 year option:</u>	<u>5 year option:</u>	<u>5 year option:</u>
Total Lease Cost: \$85,476.54	Total Lease Cost:\$726,550.61	Total Lease Cost:\$6,838,123,36
Cost Per Year: \$17,095.31	Cost Per Year: \$145,310.12	Cost Per Year: \$1,367,624.67
<u>4 year option:</u>	<u>4 year option:</u>	<u>4 year option:</u>
Total Lease Cost: \$68,983.90	Total Lease Cost:\$586,363.19	Total Lease Cost:\$5,518,712.33
Cost Per Year : \$17,245.96	Cost Per Year: \$146,590.80	Cost Per Year: \$1,379,678.08
<u>3 year option:</u>	<u>3 year option:</u>	<u>3 year option:</u>
Total Lease Cost: \$52,195.29	Total Lease Cost:\$443,659.97	Total Lease Cost:\$4,175,623.23
Cost Per Year: \$17,398.43	Cost Per Year: \$147,886.66	Cost Per Year: \$1,391,874.41

Comment: I believe leasing, with multiple durations available on a BPA, would be an advantageous option for Federal users.



WHY

- Develop a functional model?
 - Consistent yearly values for budgeting.
 - Modernizing is built into the model.
 - Clearly defined acquisition, lifecycle, disposal – which could lessen burden on staff throughout the process.
- Lease over purchase?
 - That I leave up to you...
 - I think multiple options are generally useful.
- *Are any Federal users currently leasing?*



WHEN

- Major changes in measuring technology occurs, what is your plan?
 - I believe having a baseline (recommended) function model could reduce the transitional burden.

WHERE

- Could Federal GME users collaborate towards sharing resources, if that is an option?



HOW

- Could there be a centralized BPA that all Federal users could purchase against?
 - NASA SEWP / GSA (somehow)
 - One that encompassed all our needs?
- Could the FGDC support this initiative?

Fun consideration: NCN = 3000+ systems; purchase to own would be approximately \$81,430,000.00; yearly fee to lease may only be \$70,990,000.00 – savings of \$10,000,000.00 in 5 year period? Could be...



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Summary

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CONCLUSION

- *I believe BPA's that include total solutions (Hardware & Leasing options) could provide significant cost savings – among other advantages.*
- *It would be great if this committee would consider sponsoring a BPA, like previous "[SmartBUY](#)", or NASA SEWP for Hardware & Leasing options.*



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Thank you! I sincerely appreciate everyone taking the time to attend today and allowing me this opportunity to present.

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CADASTRAL SURVEY