

**Centers of Excellence Proposal Summaries  
Sixth Round of Funding**

**Commission-Recommended Proposal  
May 19, 2010**

**North Dakota State University – Center for Sensors, Communications and Control**

*Amount Recommended: \$2,800,000*

*Amount of Match: \$5,600,000*

*Proposed Private Sector Partners: SNAPS Holding Company, Pedigree Technologies, Intelligent InSites, PureChoice*

*Proposed Job Creation: 72-80*

*Summary:* The Center of Excellence for Sensors, Communications and Control (CSCC) will provide much needed expertise in core areas of JAVA programming, sensor integration and systems engineering that the selected partners are lacking. CSCC will build upon previous CNSE federal programs and North Dakota centers of excellence. CSCC will leverage current general engineering staff and add to that staff to support its mission to grow high-tech jobs and high-tech economic activity in North Dakota. The added staff at CNSE will be engineer and computer science professionals with significant domain expertise in sensor design, communications and control. This will differentiate the new center with previous centers in that previous centers were more general in nature and expertise. Domain expertise is what can separate a region or city from others in attracting companies and professionals that wish to participate in cluster activity, leading to hyper-growth in economic activity. The jobs created and the economic activity undertaken will be overwhelmingly the product of the private sector partners. The NDSU staff will add to its portfolio of expertise in such a way that a sustainable center will be created to provide services to other future collaborators.

### **III. Executive Summary** (limited to one page)

The Center is a response to private sector partners who have identified technical expertise at NDSU in the areas of sensors, communications and control. The previous body of work performed, in particular, at the NDSU Center for Nanoscale Science & Engineering (CNSE) has created this opportunity to collaborate with the private sector partners identified herein. The previous body of work includes federal programs in sensor technology and communications. It includes prior work under State Centers of Excellence in electronics and integrated systems.

This new center for sensors, communications and control builds upon and accelerates, for the first time, a cluster of expertise in these functional disciplines. This is a departure from past centers whose mission has been more general, e.g. electronics, systems. Technology clusters are what enabled geographic regions such as "Silicon Valley" to lead the nation/world in semiconductors, and "Medical Alley" to lead the nation/world in medical device development.

Our private sector partners were chosen because of their leading-edge positions in sensor, communications and control markets. Together, we believe jobs and economic activity will be created in North Dakota as a result of this Center. Pedigree Technologies and Intelligent InSites are relatively small companies that have grown from start-up to "emerging" status and have doubled their North Dakota payrolls in the past 12 months. SNAPS Holding Company has grown in North Dakota and evolved in to a global IT business process outsourcing company. SNAPS Holding Company's expertise in communications has led it to a position where acquisition and organic growth will lead it in to new markets that require NDSU expertise. PureChoice is a Minnesota sensing, communications and control company that will grow in North Dakota upon a successful engagement with the new Center of Excellence.



	A	B	C	D	E	F
1	Center for Sensing, Communications & Control (CSCC)					
2	Summarized Statement of Expenditures					
3	7/1/2010 to 6/30/2014					
4						
5						
6		FYE	FYE	FYE	FYE	
7	Description	6/30/2011	6/30/2012	6/30/2013	6/30/2014	Total
8						
9	<b>Summarized Expenditure Budget:</b>					
10						
11	Personnel Expense	\$ 855,000	\$ 1,770,000	\$ 1,611,000	\$ 716,000	\$ 4,952,000
12	Operating Expense	\$ 100,000	\$ 200,000	\$ 180,000	\$ 80,000	\$ 560,000
13	Equipment	\$ 45,000	\$ 30,000	\$ 9,000	\$ 4,000	\$ 88,000
14						
15	Total Expenditures	\$ 1,000,000	\$ 2,000,000	\$ 1,800,000	\$ 800,000	\$ 5,600,000
16						
17						
18						
19	<b>Budgeted Cash Distributions From Department of Commerce:</b>					
20						
21	Personnel Expense	\$ 425,000	\$ 890,000	\$ 801,000	\$ 356,000	\$ 2,472,000
22	Operating Expense	\$ 50,000	\$ 100,000	\$ 90,000	\$ 40,000	\$ 280,000
23	Equipment	\$ 25,000	\$ 10,000	\$ 9,000	\$ 4,000	\$ 48,000
24						
25	Total Expenditures	\$ 500,000	\$ 1,000,000	\$ 900,000	\$ 400,000	\$ 2,800,000
26						
27						
28						
29	<b>Matching Funds</b>					
30						
31	SNAPS	\$ 500,000	\$ 1,100,000	\$ 1,100,000	\$ -	\$ 2,700,000
32	Pedigree Technologies	\$ 100,000	\$ 200,000	\$ 300,000	\$ 400,000	\$ 1,000,000
33	Intelligent InSites	\$ 300,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 1,500,000
34	PureChoice	\$ 100,000	\$ 300,000	\$ -	\$ -	\$ 400,000
35						
36	Total Match	\$ 1,000,000	\$ 2,000,000	\$ 1,800,000	\$ 800,000	\$ 5,600,000
37						
38						
39						
40			Cash			
41	<b>Cash From ED COE Funds For Projects:</b>		Project			
42						
43	SNAPS		\$ 1,350,000			
44	Pedigree Technologies		\$ 500,000			
45	Intelligent InSites		\$ 750,000			
46	PureChoice		\$ 200,000			
47						
48	Totals		\$ 2,800,000			