e The computation accelerator part must be constructed by accelerating computing devices based on many-core architecture with separated memory system. This part must be connected to the general purpose CPU part to perform high speed computing coordinating with it. If the computation accelerator part consists of multiple chips with many-core architecture, it is not necessary to have a hardware shared memory system among them.

f The processor of computation accelerator part of each node must consist of 120 or more effective processing cores per node based on 64-bit extended IA32 architecture. The theoretical total peak performance of computation accelerator part per node must be 2.02 TFLOPS or higher (double precision floating point).

g The high performance interconnection network to connect all the nodes must provide the peak performance under the following condition. Each computation node must be equipped with interconnection network interface with at least 13 GByte／sec of theoretical peak performance. If a single physical network link cannot support this performance, it is allowed to provide the same performance with bonding of multiple links.

h The interconnection network among all the computation nodes must provide a full bisection bandwidth.

i A computation node must be equipped with a hard disk drive system with equal to or more than 1.5 TiByte of capacity. The hard disk drive must be redundant and fault-tolerant with RAID-1, RAID-5 or RAID-6 feature.

j A computation node must equipped with a hardware monitoring and managing function with a supporting software to check the system condition.

k For multiple CPU cores in the general purpose CPU part, the programming tools and languages for shared memory programming such as C, C++ and Fortran90 compilers with both an automatic parallelization feature and OpenMP API must be provided.

l On the computation accelerator part on a computation node, any efficient programming environment to utilize its inherent parallelism and performance must be provided.

m On a computation node, the general purpose CPU part and the computation accelerator part must be connected by a bus system with equal to or more than 160 Gbps of theoretical peak bandwidth. It is allowed to support the same performance with multiple buses.

n For the parallel programming over the computation nodes, MPI programming environment based on MPI2.0 specification must be provided.

o The operating system must be based on UNIX. (Linux operating system is preferred.)

p The total peak performance of the massively parallel processing server must be equal to or more than 108 TFLOPS and 525 TFLOPS in double precision computation for the general purpose CPU part and the computation accelerator part, respectively.

q The total memory capacity of the massively parallel processing server must be equal to or more than 16 TiByte and 4 TiByte for the general purpose CPU part and the computation accelerator part, respectively.

B The large scale storage system must satisfy the following conditions.

a The total capacity of user utilization space must be equal to or more than 200 TiByte.

b It must be supported by RAID-5 or RAID-6 for redundant and fault tolerant operation, and the modules to construct entire storage system must be able to replace without stopping the entire system when the disk or storage control system fails.

C The external network system must satisfy the following basic features.

a All the computation nodes must be connected to the external network system by Ethernet with Gigabit Ethernet or higher specification.

b The external network system consists of a set of edge switches to combine Ethernet links from all the computation nodes and a L3 router to connect to the external network. The router must be equipped with four or more of 10G Ethernet ports for external connection.

D The sustained performance of the massively parallel processing system will be evaluated by a set of benchmarks individually provided from this specification.

E The power consumption of the massively parallel processing server and the large scale storage system must be less than 250 kVA in total.

F The hardware system constructing the Large Scale Many-Core Experimental System must be highly reliable.

G The system must be flexibility to port the application software programs developed and maintained in the university.

H The system must be supported by various third party application software and numerical libraries.

I The system must be equipped with the accounting and statistic management system for system utilization.

(5) Time limit for the submission of the requested material : 5 : 00 PM 4, April, 2013

(6) Contact point for the notice : Satoshi Kuramochi, Associate Head Center for Computational Sciences, University of Tsukuba, 1―1―1 Tennodai Tsukuba-shi 305―8577 Japan, TEL 029―853―6486

資料提供招請に関する公表

次のとおり物品の導入を予定していますので、当該導入に関して資料等の提供を招請します。

平成25年2月21日

国立大学法人広島大学　契約担当職

理事（財務・総務担当）　平野　仁司

◎調達機関番号　415　◎所在地番号　34

○第16号

1　調達内容

(1)　品目分類番号　23

(2)　導入計画物品及び数量　自動書庫システム一式

(3)　調達方法　購入等

(4)　導入予定時期　平成25年度９月以降

(5)　調達に必要とされる基本的な要求要件

A　図書の入出庫管理、在庫管理、設備制御管理などが自動的に行えること。

B　80万冊以上の収容能力を備えていること。

C　本学図書館電子計算機システムと連動できること。

2　資料及びコメントの提供方法　上記１(2)の物品に関する一般的な参考資料及び同(5)の要求要件等に関するコメント並びに提供可能なライブラリーに関する資料等の提供を招請する。

(1)　資料等の提供期限　平成25年３月25日17時15分（郵送の場合は必着のこと。）

(2)　提供先　〒739―8511 東広島市鏡山一丁目３番２号　広島大学財務・総務室契約グループ主査（契約担当）　原田　宜輝　電話 082―424―6088

3　説明書の交付　本公表に基づき応募する供給者に対して導入説明書を交付する。

(1)　交付期間　平成25年２月21日から平成25年３月25日まで。

(2)　交付場所　上記２(2)に同じ。

4　説明会の開催　本公表に基づく導入説明会を開催する。

(1)　開催日時　平成25年２月27日14時00分

(2)　開催場所　広島大学図書館中央図書館会議室

5　その他　この導入計画の詳細は導入説明書による。なお、本公表内容は予定であり、変更することがあり得る。