Intel's Efforts to Achieve a Responsibly Sourced Mineral Supply Chain

White Paper

EXECUTIVE SUMMARY

Intel products contain mined materials that are integral to many electronics industry technologies. While we do not procure these raw materials directly, our suppliers acquire and use minerals from multiple sources worldwide. Intel is committed to the responsible sourcing of minerals – sourcing done in an ethical and sustainable manner that safeguards the human rights of everyone in our global supply chain. Intel was one of the first companies to address the issue of "conflict minerals"[1] originating from the Democratic Republic of the Congo (DRC) and adjoining countries (referred to as the "Covered Countries") in its supply chain. We have worked diligently to put the systems and processes in place to enable us to reasonably conclude that the tantalum, tin, tungsten and gold in our products do not finance or benefit armed groups in the region while continuing to support legitimate mineral sourcing.

Intel was the first electronics company to publish goals related to manufacturing products from "conflict-free"[2] sources. Specifically, we met our published goals to manufacture microprocessors with tantalum sourced from conflict-free supply chains in 2012 and with tantalum, tin, tungsten and gold sourced from conflict-free supply chains in 2013. In 2018, we began the process of expanding our program to include a due diligence program that extends beyond the scope of conflict minerals from the Covered Countries and also comprehends additional human rights abuses outlined in the "OECD Guidance"[3].

Intel has worked extensively on responsible mineral sourcing for over ten years. Below is a summary of some of our milestones and accomplishments:

- Conducted our first conflict minerals supply chain survey in 2009.
- Since 2009, visited 111 different smelter and refiner facilities in 23 countries with the goal of providing education on conflict minerals, collecting country of origin information of the conflict

1 "Conflict minerals", as defined by Securities and Exchange Commission (SEC) rules, is a broad term which means columbite-tantalite (coltan), cassiterite, gold, wolframite, or their derivatives which are limited to tantalum, tin or tungsten, regardless of whether these minerals finance conflict in the Democratic Republic of the Congo (DRC) or adjoining countries.

2 "Conflict-free" refers to products, suppliers, supply chains, smelters, and refiners that, based on our due diligence, do not contain or source tantalum, tin, tungsten or gold (referred to as "conflict minerals" by the U.S. Securities and Exchange Commission) that directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo or adjoining countries.

3 "OECD Guidance" refers to Organisation for Economic Co-operation and Development Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, Third Edition, and related Supplements on Tin, Tantalum and Tungsten and on Gold.

minerals in our supply chain, and encouraging participation in the Responsible Minerals Assurance Process (RMAP), formerly the Conflict-Free Smelter Program (CFSP); a responsible mineral sourcing validation program administered by the Responsible Minerals Initiative (RMI) formerly Conflict-Free Sourcing Initiative (CFSI).

- Established and then co-chaired the EICC and GeSI Extractives Working Group through 2013, which led to the creation of the CFSI, later renamed the RMI.
- Conducted on the ground reviews of the minerals trade in the DRC in 2010 and 2013.
- Supported in-region mining efforts by participating in the "Solutions for Hope" project to obtain tantalum from conflict-free sources in the DRC, and being members of or providing support to iTSCi, Better Sourcing Program (BSP) and the Public-Private Alliance for Responsible Minerals Trade (PPA).
- Demonstrated our commitment to continuing action on this issue by signing a multi-stakeholder statement called the "Challenge to the Conflict Mineral Rule" in 2012.
- In 2013 we met our published goal to manufacture microprocessors with tantalum, tin, tungsten and gold sourced from conflict-free supply chains.
- Reported annually on our supply chain due diligence activities in this white paper, our Corporate Social Responsibility Report and our conflict minerals disclosures to the SEC, available on our company website at www.intel.com/conflictfree.
- Since 2014, have obtained an Independent Private Sector Audit (IPSA) of applicable sections of our conflict minerals SEC filing which concluded the design of our conflict minerals program is in conformity with the OECD Guidance.
- Since 2017, have conducted supplier surveys and due diligence on cobalt sourcing for our Intel manufactured IC products and reported results in our Corporate Social Responsibility Report.

Driving Accountability in the Supply Chain

The electronics supply chain is deep and wide—with multiple layers of suppliers located in many different countries. This supply chain model has led to incredible efficiency and the ability to produce high-quality computers and consumer electronics at exceptional price points. However, this same highly decentralized, ultra-efficient supply chain makes it extremely difficult to trace the source of minerals used in products.

In pursuit of understanding our complex supply chain, Intel first asked our suppliers in 2009 to complete a survey on the origin of minerals for the tantalum, tin, tungsten and gold used in their products and components supplied to Intel. The purpose of this survey was to understand three items: (1) whether our suppliers had implemented conflict mineral sourcing policies; (2) whether they had the ability to trace the minerals they used back to the source; and (3) whether they could identify the smelters and refiners that process the minerals in their own supply chain.

Our initial survey results demonstrated great variance in the amount of information our suppliers knew about the minerals used in their supply chains. This finding convinced us that the most effective way to ensure that the tantalum, tin, tungsten and gold used in the electronics supply chain was from sources not funding conflict in the Covered Countries was to implement a validation process at the smelter and refiner level. This is where ore is converted to ingots, bullion and other conflict mineral containing derivatives. The smelter or refiner is a key point in the supply chain for determining the source of tantalum, tin, tungsten and gold contained in materials supplied to Intel. Partnering with the smelter and refiner facilities is important because once a mineral is processed into a metal, it's difficult to know what country or mine the metal originated from.

Consequently, Intel conducted its first on-site conflict minerals smelter review in 2009. This was the first review ever done in the electronics industry for conflict minerals, and was the catalyst for development of the Conflict-Free Smelter Program (CFSP), now RMAP, an innovative industry audit program designed to validate smelters' and refiners' sourcing practices. We also sent a representative to the eastern DRC in 2010 and 2013, as part of delegations from the U.S. We found that speaking with the various stakeholders involved in the minerals trade in the DRC was invaluable to our understanding of both the challenges and opportunities on this important issue.

Encouraging Industry-Wide Action

Many industries use tantalum, tin, tungsten or gold in their products including, e.g.: aerospace, automotive, jewelry, information technology, and consumer electronics. Intel and others in our industry quickly realized that we would need to work across many industries to tackle this complex problem. To support multi-industry collaboration, Intel has assisted in convening a number of well-attended industry meetings on conflict minerals. In 2009, we co-chaired the first electronics industry supply chain meeting for tin in Vancouver, Canada. Since then, we have sponsored or co-sponsored a "call to action meeting" in San Francisco; a meeting on tantalum at our facility in Chandler, Arizona; a meeting with the gold industry in Denver, Colorado; and a multi-stakeholder meeting in Philadelphia, Pennsylvania.

We also co-chaired the EICC and GeSI Extractives Working Group through 2013, which led to the creation of the Conflict-Free Sourcing Initiative (CFSI), now RMI, a joint initiative of more than 350 companies from ten different industries. RMI and its member companies collaborate together and provide tools and resources that support responsible mineral sourcing, including the RMAP validation audit of smelters and refiners and the Conflict Minerals Reporting Template (CMRT), a supply chain survey tool. Additionally, the RMI has hosted conflict minerals supply chain workshops to educate others on the responsible mineral sourcing topic. The RMI has grown into one of most respected industry resources for companies addressing the responsible sourcing of minerals. More information regarding the RMI is available at their website - http://www.responsiblemineralsinitiative.org/.

Traceability in the Supply Chain

Through our industry meetings and forums we acquired a great deal of information and gained insight regarding traceability in our supply chain. Our on-site smelter and refiner reviews have enabled us to understand the unique operating characteristics of individual smelters and refiners, and determine the current gaps in their ability to trace the source of ore to countries and mines of origin. For example, some facilities had documentation indicating the country that mineral ore was shipped from, but not on the country where the ore was originally mined. This is a critical issue because minerals (especially gold) can be smuggled into other countries, making traceability even more challenging.

We also learned that the infrastructure needed to trace the source of materials in our supply chain did not exist and concluded that a process to audit and validate smelters and refiners would be necessary. The smelter and refiner reviews conducted by Intel laid the groundwork for the EICC and GeSI Extractives Working Group to develop and implement a process for independent third party audits of smelters and refiners—the Conflict-Free Smelter Program (CFSP), now RMAP. Through the RMAP validation process, an independent third party audits the management systems and processing activities of a smelter or refiner. The auditor utilizes the RMAP audit standard to determine if sufficient systems exist to ensure appropriate risk-based due diligence in the mineral supply chain.

Due to the unique characteristics and complexities associated with each of the four conflict minerals, the working group determined that it would be most feasible to address one mineral at a time. In

2010, the working group created the first tantalum smelter audit protocol, and then selected three independent auditing firms to conduct the tantalum smelter validation audits. In 2011, under the leadership of Intel and with the cooperation of many within the EICC and GeSI industry groups, the CFSP released the audit protocols for smelters and refiners that process gold, tin, and tungsten. These audit protocols are now in place and serve as a core component of the CFSP validation audit for smelters and refiners. To increase the accuracy and efficiency of the CFSP audit procedures, Intel collaborated with metal-specific industry associations, such as the Tantalum-Niobium International Study Center (TIC), International Tin Research Institute (ITRI), London Bullion Market Association (LMBA), Responsible Jewelry Council (RJC), International Tungsten Industry Association (ITIA) and the Tungsten Industry Conflict Minerals Council (TI-CMC).

Since 2010, smelters and refiners that successfully comply with the audit requirements are listed on the publicly available RMAP Conformant Smelters & Refiners. As of May 2019, the RMI website listed 255 conformant smelters and refiners across four different mineral categories (102 gold, 40 tantalum, 72 tin, and 41 tungsten). More facilities are being added as facilities complete the rigorous auditing process. Beginning in 2019, the RMAP audit standard was updated to address not only conflict in the Covered Countries, but also a wider range of human rights abuses by including OECD Guidance's Annex II risks in conflict-affected and high-risk areas (CAHRAs) globally. The goals of making this information public is to be transparent, to recognize smelters and refiners which process responsibly sourced minerals, and to provide new options for companies that want to obtain responsibly sourced minerals for their products and customers.

In 2017, Intel developed and deployed a survey to direct suppliers that provide materials that contribute cobalt to Intel's manufactured products. This allowed us to identify cobalt smelters and refiners in our supply chain and conduct due diligence to reasonably validate that child labor was not used in any DRC-originated cobalt. The RMI released the Cobalt Refiner Due Diligence Standard in 2018 and Intel has been actively educating the refiners in our supply chain to encourage their participation in the RMI audit scheme as we continue to conduct our own due diligence in the supply chain.

Achieving our Goals to Manufacture Products from Conflict-Free Sources

Before the publication of the final U.S. Securities and Exchange Commission's rule on conflict minerals, Intel set a public goal to manufacture the world's first commercially available microprocessor that is conflict-free for tantalum, tin, tungsten, and gold in 2013. At the time we set this goal in February 2012, we did not know whether it was achievable, but we used the goal to push ourselves and to drive action.

On January 6, 2014 at the Consumer Electronics Show in Las Vegas, Nevada, Intel Chief Executive Officer Brian Krzanich announced that Intel had achieved its goal, and he celebrated that milestone by encouraging other companies and industries to join Intel in a collective effort to obtain the minerals from conflict-free sources.

We achieved this milestone by establishing a due diligence program that focuses our efforts in two primary areas:

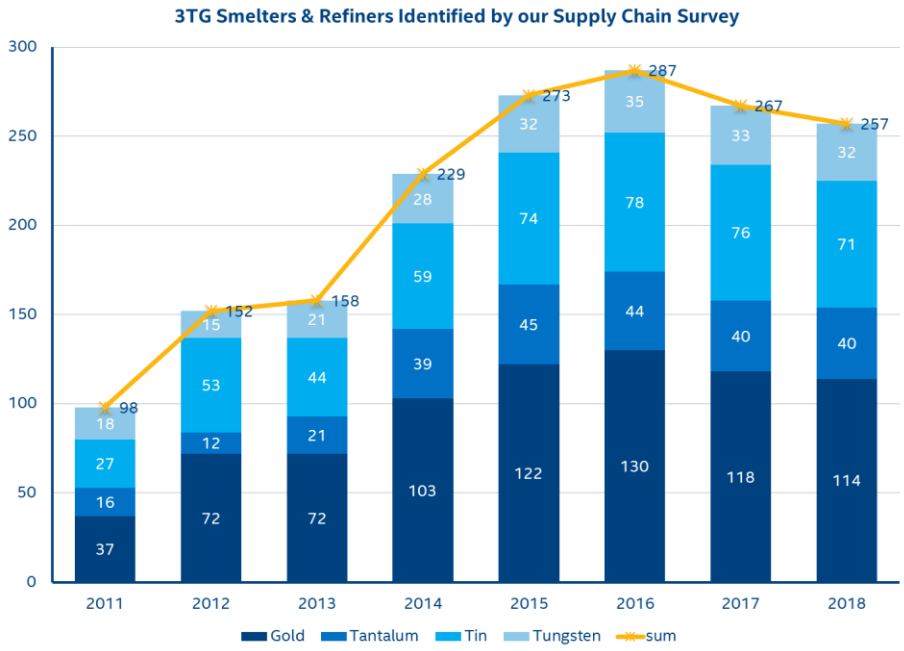
(1) **Risk Identification**: Each year we conduct a supply chain survey to identify the smelters and refiners that process the metal contained in the products supplied to Intel, and the country of origin and trade of minerals used. We then compare those smelters and refiners to the list of facilities that conform to a responsible mineral sourcing validation program such as the RMI's Responsible Minerals Assurance Process (RMAP)—formerly the Conflict Free Smelter Program

(CFSP). We use the information to identify potential mineral supply-chain risks.

(2) **Risk Mitigation**: When we identify potential risks, we conduct further due diligence, which may include on-site smelter or refiner visits. Since 2009, we have visited 111 different smelter and refiner facilities in 23 different countries. Such visits help identify risks, encourage smelters and refiners to participate in an audit program to validate their sourcing practices, and drive risk mitigation for human rights impacts. We will disengage from mineral supply chains that cannot uphold our responsible mineral sourcing standards.

Supplier Due Diligence Summary

Since conducting our first supply chain survey in 2009, Intel has consistently engaged our direct suppliers on the conflict minerals issue. Our annual supply chain survey requests suppliers to identify the smelters and refiners and countries of origin of the tantalum, tin, tungsten and gold in products they supply to us using the RMI's Conflict Minerals Reporting Template (CMRT). We evaluate the accuracy and completeness of the CMRTs our suppliers provide using third party software and through review by members of our internal conflict minerals team. When incomplete or potentially inaccurate information is identified, we contact the supplier and request the supplier to investigate the information and provide an updated CMRT. We also evaluate whether a supplier meets our responsible minerals policy or contractual requirements based on information included in the CMRT. These requirements include that our suppliers must maintain a publicly available responsible minerals sourcing policy, provide a CMRT upon our request, and use smelters and refiners that are either conformant to a responsible mineral sourcing validation program, have begun participating in such a program, or are included among the facilities that we have reasonably concluded, through our own due diligence activities, do not process conflict minerals which originated from the DRC or adjoining countries. Approximately 96% of our relevant suppliers are currently meeting our responsible minerals policy or contractual requirements. Below is a summary of the smelters and refiners identified by our direct suppliers through our annual supply chain survey process.

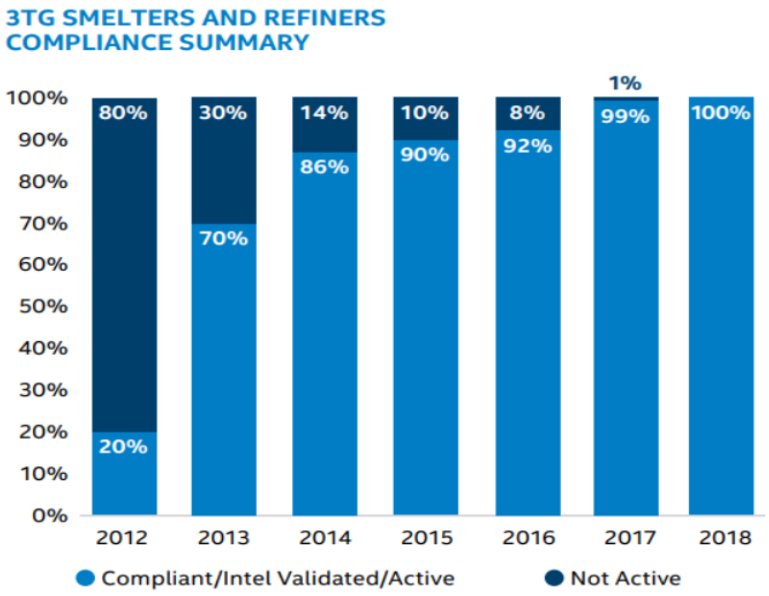


Smelter and Refiner Due Diligence Summary

We further conduct due diligence on the smelters and refiners identified through our supply chain survey. We continually compare the smelters and refiners identified in the survey against the lists of facilities which are participating in responsible mineral sourcing validation programs that carry-out independent third party audits of smelter and refiner facilities, such as the RMAP. For those smelters and refiners which are "Not Active" in an independent third party audit program, we attempt to contact and visit those facilities to request country of origin and chain of custody information and request their participation in a responsible mineral sourcing validation program such as the RMAP. There are typically many layers in the supply chain between Intel and a smelter or refiner, so it is often difficult to establish contact with these facilities. Once contact has been established, some smelters and refiners are reluctant to allow us to visit their facility to conduct an on-site review of country of origin or chain of custody information. If we are unable to establish contact with smelter and refiner facilities, we seek source and chain of custody information from publicly available sources including smelters and refiner websites. In some cases, both through our direct contact with a facility or public records search, we determine the source and chain of custody information to be reliable and complete and therefore we use the information to make reasonable conclusions that the facility does not process conflict minerals originating from the DRC or adjoining countries (referred to as "Intel Validated").

As of December 2018, Intel has visited and conducted reviews at 111 different smelter and refiner facilities in 23 countries (Australia, Austria, Belgium, Bolivia, Canada, Chile, China, Germany, Indonesia, Japan, Malaysia, New Zealand, Norway, Peru, Poland, Rwanda, South Africa, Republic of Korea, Switzerland, Thailand, United States, United Arab Emirates and Vietnam). Smelters and refiners are continuing to seek validation from an independent third party audit program to meet the growing supply chain expectation for responsibly sourced minerals.

Thus far, all 257 of the smelters and refiners in our supply chain were either conformant to a responsible mineral sourcing validation program, have begun participating in such a program, or are facilities that, based on our own due diligence activities, we have reasonably concluded do not process conflict minerals which originated from the Covered Countries. Below is a summary of our year-over-year progress to validate smelters and refiners identified in our supply chain.



Additional details regarding our due diligence efforts are explained in our most current conflict minerals disclosures provided to the SEC available at our website, www.intel.com/conflictfree.

Unintended Consequences

Companies working to undertake due diligence in their supply chain may unintentionally drive down demand for all minerals coming from the Great Lakes Region in Central Africa by working to secure sources outside the region. This well-intended action can inadvertently hurt the economic opportunities for artisanal and other legitimate miners operating in that region.

Intel is working to help mitigate such unintended consequences. In late 2011, Intel, in partnership with the U.S. State Department, the U.S. Agency for International Development (USAID), and other companies, announced the establishment of the Public-Private Alliance for Responsible Minerals Trade (PPA). The PPA provides funding and coordination support to organizations working within the region to develop verifiable conflict-free supply chains; align chain-of-custody programs and practices; encourage responsible sourcing from the region; promote transparency; and bolster in-region civil society and governmental capacity.

To enable responsible in-region minerals trade from the DRC and adjoining countries, we continue to support programs such as iTSCi and the PPA. These programs assist in the creation and implementation of due diligence programs consistent with the OECD Guidance. We are an associate member of iTSCi. We support the creation of other in-region validation programs such as the International Conference on the Great Lakes Region (ICGLR) Regional Certification Mechanism. Our Responsible Minerals Sourcing Policy summarizes our quest to safeguard the human rights of everyone in our supply chain.

Government Participation

Intel believes that an effective solution to the complex issue of responsible mineral sourcing will require coordinated efforts by governments, non-governmental organizations (NGOs) and industry. Intel has met with representatives from the U.S. government, the European Commission and EU member states and other international governments on the topic and to share the industry's approach of auditing smelters and refiners. Intel supports the OECD Guidance and participates in the Joint Forum on Responsible Mineral Supply Chains organized by the OECD, International Conference on the Great Lakes Region and United Nations Group of Experts.

The U.S. Congress included provisions to address conflict minerals in the Dodd-Frank Act, and the SEC followed with disclosure regulations for public companies in the U.S.; however, Intel's efforts on this issue pre-date this action. In late 2012, the National Association of Manufacturers, the U.S. Chamber of Commerce, and the Business Roundtable filed a petition for judicial review of the SEC conflict minerals disclosure regulations. Intel is a member of these trade associations; however, the positions of these trade organizations do not always align with Intel's positions. Consequently, Intel signed onto a multi-stakeholder statement regarding the "Challenge to the Conflict Mineral Rule," to demonstrate our unwavering commitment to this issue. The statement urged stakeholders to continue the important work underway to address the critical issue of transparency in the minerals supply chains.

We believe that legislation, including the U.S. Securities and Exchange Commission conflict mineral disclosure requirements and most recently, the European Union's (EU) minerals regulation, has been helpful in bringing others to the table and maintaining broad momentum on this issue. For the past several years, Intel engaged with our industry to discuss proposed EU legislation addressing responsible sourcing of tantalum, tin, tungsten and gold from conflicted affected and high risk areas. Now finalized, the EU legislation, alongside the European Partnership on Responsible Minerals (EPRM) and in unison with existing initiatives including the RMI, properly focuses resources on supporting further development, implementation, harmonization and improvement to existing initiatives in relevant economies at key points in the supply chain. Efforts to continue development and scaling of systems to validate responsible sources should be supported as a priority. Smelters and refiners are recognized as the pinch point in the minerals supply chain and therefore the EU legislation will complement existing initiatives to mitigate supply chain risks by applying OECD-conformant due diligence processes to establish responsibly sourced mineral supply chains.

We will continue to focus our energy and efforts as we always have—on putting in place systems and due diligence measures that will enable us to reasonably assure that products and components supplied to us contain responsibly sourced minerals. Such actions support Intel's goal to use tantalum, tin, tungsten, and gold in our products that do not finance or benefit armed groups in the DRC and adjoining countries while continuing to support responsible mineral sourcing from the region. We have made substantial progress towards our goal to validate our broader product base and will continue our pursuit of responsible sourcing, while our engagement with business partners, governments, and NGOs continues and evolves. Changing conditions deep in our supply chain and other potential risks involved in the mining and trade of minerals, beyond conflict in the DRC and adjoining countries, require ongoing vigilance. These changing conditions have prompted Intel's responsible minerals program to evolve to address a broader range of minerals and originating from Conflict-Affected and High-Risk Areas (CAHRAs), as defined by the OECD Guidance. We are assessing the risks of other minerals in our products and updating our due diligence practices to address CAHRAs when conducting country of origin analysis in our supply chain.

Summary

From the time we became aware of the potential for conflict-linked minerals from the DRC to enter our supply chain, we have responded with a sense of urgency and resolve. We have approached this issue in the same manner as we address other significant business challenges at Intel. We first collected as much information about the situation as we could, not relying solely on our own knowledge, but also seeking insight and experience from other stakeholders and organizations with expertise in this area. We communicated with our suppliers and expressed our sense of urgency on this issue and our expectations. We met with industry peers and governmental officials, and traveled hundreds of thousands of miles around the globe to visit numerous smelters and refiners in our relentless pursuit of a conflict-free supply chain.

We determined that the most effective and efficient method for reducing the potential for conflict minerals to enter our supply chain was to focus on the smelter and refiner facilities where the ore is processed. Intel and other industry partners developed a smelter and refiner validation process, called the Conflict-Free Smelter Program (CFSP), now RMAP. RMAP audits are ongoing, and as of 2019, the audit standard has been updated to address a broader range of risks and geographies as described in the OECD Guidance. Additionally, Intel has participated in the development of industry-wide standards to better align the collective approach to responsible cobalt sourcing. We are actively focused on outreach to the cobalt smelters and refiners in our supply chain to encourage RMI and RMAP participation. This will further strengthen our assurance that cobalt in Intel's manufactured products is responsibly sourced. We believe this process will be instrumental in enabling the industry to source tantalum, tin, tungsten, gold, and now cobalt, responsibly.

As a result of our efforts, in January 2014 we announced an important industry milestone: Intel accomplished its goal to manufacture microprocessors that are conflict-free for tantalum, tin, tungsten, and gold. As of March 1, 2019, all 257 of the smelters and refiners in our supply chain were either conformant to a responsible mineral sourcing validation program, have begun participating in such a program, or are facilities that, based on our own due diligence activities, we have reasonably concluded do not process conflict minerals which originated from the Covered Countries. We have also surveyed direct suppliers that provide materials that contribute cobalt to Intel's manufactured products to validate that child labor was not used in any DRC-originated cobalt. We will continue our pursuit to validate the supply chain for compliance to our Responsible Minerals Policy and to address emerging supply chain risks to help establish responsibly sourced mineral supply chains for our company as well as our industry. The responsible sourcing of minerals will take ongoing vigilance.
We welcome your feedback on our approach and disclosure at:
www.intel.com/about/corporateresponsibility/contactus.

For more information, visit www.intel.com/conflictfree